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Examining the Intersection of Public Relations and Vaccine Communication: An Analysis of Audience-Centered Strategies for Evolving Health Information

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An Analysis of Audience-Centered Strategies for Evolving Health Information

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Dedication

This research project is dedicated to my family, friends, and professors at Seton Hall.

First, I would like to thank my family for being my sounding board, energy source, and support system. I would also like to thank the good friends I made in my cohort these past two years. I will never forget the hours of proofreading and Saturday lunches. Lastly, I would like to thank my faculty advisor, Dr. Schray, and the rest of the thesis committee for encouraging me to reach new heights in my public relations research.

Abstract

In an uncertain environment, public relations (PR) practitioners provide signposts to fulfill different audience information needs. However, little research exists on the role of the PR practitioner in communicating evolving health information, especially during urgent health events like a pandemic. Through a comparative case study of PR tactics by three American public health organizations, this project aimed to understand what strategies health care professionals can use to improve communication about the COVID-19 vaccine to priority populations. The findings then informed an original artifact with six best practices for audience-centered vaccine communication.

Keywords: public relations, public health, vaccine, priority populations, United States, case study

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Chapter 1

Statement of the Problem

Introduction

In an increasingly digital world, people rely on online sources to complement or augment their understanding of health information. According to a recent survey by the American Health Information Management Association (AHIMA) Foundation, almost 62% of Americans reported not feeling confident in the health information they discuss with their doctors (*AHIMA Foundation*, 2021). Urgent health events increase the risk associated with uncertainty. In particular, the ongoing coronavirus (COVID-19) pandemic embodies such risk due to the rapid loss of life. Personal health care providers functioned as the most trusted source of information on the initial rollout of the COVID-19 vaccine (Hamel et al., 2020). However, due to limited accessibility and constantly changing data, people turned to traditional media—often accessible in online formats—to find additional clarity during the pandemic response (Piltch-Loeb et al., 2021).

The United States spends more of its gross domestic product on health care services than any industrialized nation (Nunn et al., 2020; Wise, 2001). Government public health services include epidemiological surveillance, inoculations, immunization/vaccination services, disease prevention programs, and public health laboratory operations (Kamal et al., 2020). Yet, only 5% of Americans represented half of U.S. health care spending in 2017, mainly for personal needs like unexpected health conditions and emergencies (Nunn et al., 2020). Generally, population-based services account for the lowest portion of health spending (Wise, 2001).

To fill the gap in population-based resources, health care delivery has intertwined with digital communication technologies like websites more (Hu, 2015). To date, 59% of Americans reported contacting their doctors directly, while roughly the same number chose the Internet to find the information they sought (*AHIMA Foundation*, 2021). As Internet access expands, more people select it as a primary source of health information. However, the Internet presents challenges for health users who need understandable and trustworthy information (Patterson et al., 2015).

During the urgent COVID-19 pandemic, American health journalists also struggled to accommodate increased population interest and readership for health reporting (Yang, 2021). Strained public health resources impact the quality of public information officer (PIO)-health journalist relationships during emergency health events (Avery & Lariscy, 2007). So, journalists tried to tackle the shortage by sharing more resources. In that way, they could quickly identify correct information rather than simply increase share of voice (Yang, 2021). Regardless of the shift, Avery and Lariscy (2007) warned that receiving publics can still suffer negative effects from the discoordination or divergent agendas of journalists and information officers, especially in health situations that require timely action. Vardeman-Winter et al. (2013) also noted that an inherent balance emerges when more laypeople exist than decision-makers. Those information barriers result from static and monolithic media relations strategies (Avery & Lariscy, 2007).

As such, health care communicators should spearhead efforts to create a standard of excellence in audience-centered health communication. Trusted sources function as tools of influence for instruction-based information (e.g., receiving a vaccine). Communication best practices become essential for receivers that cannot follow general health recommendations like priority populations. According to the Agency for Healthcare Research and Quality, there has

been a lag in research regarding priority populations, including low-income members, racial or ethnic minorities, women, children and adolescents, elderly persons, and individuals with special health care needs (*About Priority*, n.d.). General health message designs may not adequately address the complex health needs of those groups, considering the transient nature of information in fast-paced and evolving health environments. The relatively recent practice of *digital segmentation* or "the ability to sort and reach audiences in a targeted manner using digital technologies" (Evans et al., 2019, p. 82S) provides better opportunities to satisfy their needs. Generally, few guidelines exist on strategically employing digital segmentation in public health. As such, individuals who practice *public relations* (*PR*), "a service-oriented occupation in which public interest, not personal reward, should be the primary consideration" (Newsom et al., 2013, p. 4), could be equipped to address the gap.

Problem Statement

As humans navigate novel and unforeseen health guidance (e.g., instructions during public health crises), they need reliable actors to create clear signposts for media content. In particular, PR practitioners should be at the forefront. They can serve as leaders that initiate strategic actions for underrepresented populations and leverage the value of PR in health care (Meng & Berger, 2013). Additionally, they influence immediate perceptions of trust and credibility, which holds broader implications for audience members returning to the same media channels for future health developments. Some researchers suggest that PR professionals are the most qualified to assess appropriate ways of informing audiences about a developing health environment, primarily new medical services and technologies like vaccines (Elrod & Fortenberry, 2020). However, little research exists on the role of current PR professionals in communicating developing health information.

The PR field needs to understand how to assist vulnerable populations with adaptations to health care delivery. Generally, industry professionals carry more substantial expectations to be timely and transparent. For example, the two-way communication model practiced in the PR field responds to the dynamic requirements of receivers. In the twenty-first century, modern health PR has focused on the interactional nature of media, enabling patients to communicate about health needs while simultaneously seeking new information (Tomic et al., 2010). By enabling two-way communication, PR practitioners can improve audience confidence and comprehension of further details (Catalan-Matamoros & Peñafiel-Saiz, 2019).

Purpose of the Study

Given the struggle to serve audience-centered health information needs, this project sought to determine how well the complex and dynamic information needs were represented for priority populations in the U.S. during the COVID-19 vaccine rollout. The project also endeavored to understand better the role of PR practitioners as mediators of evolving health practices and their specific involvement with targeted health care delivery. Considering they function as subject or specialization experts, they have the capacity to take on leadership positions in educating key publics and disseminating evolving knowledge.

By investigating the American COVID-19 pandemic response, this project contributed to knowledge about user experiences with new health information. For example, priority populations like women may need to engage in behaviors that balance protecting their own health and that of dependents like children (Newsom et al., 2013). Considering PR professionals conduct continuous research on receiving audiences, they can more effectively respond to insights on multi-faceted health needs. Alternatively, the findings instructed PR practitioners on applying their training to assess the shortcomings in audience-centered communication and

ultimately strengthen the relationship between impacted groups and health care authorities. Finally, the research guided best practices for shaping the media's educational role during a shifting health context (e.g., life-threatening disease outbreak and urgent response).

PR professionals specifically develop the competence and knowledge to deal with rapidly changing environments (Meng & Berger, 2013). Following the declaration of COVID-19 as a pandemic, journalists struggled to evolve into health reporters overnight (Yang, 2021). In those cases, PR practitioners can step in to expose impacted populations to the information and communication tools they need to actively manage the health environment. They can lead with specialized expertise as others navigate a new or limited understanding of the facts. In addition, they can provide a roadmap for digital health information, which varies significantly between content and quality (Patterson et al., 2015). Therefore, the research should empower those professionals and help them understand how to use their skills and abilities in health care delivery.

Summary

This research project consists of five chapters that explore the relationship between vaccine delivery and PR best practices. To begin, Chapter 1 outlines the problem and proposes a structure for the rest of the thesis. Chapter 2 reviews the scholarly literature on traditional PR, strategic health messaging, and vaccine communication. Chapter 3 describes the comparative case study and textual analysis used to collect data. Chapter 4 details the project's findings. Finally, Chapter 5 discusses the successes and limitations of the research to inform future projects and presents the culminating artifact.

Having completed an overview of vaccine literature in Chapter 2, a gap emerged in the research. Studies did not assess the ongoing compatibility of health information for vulnerable

populations functioning in changing environments like the COVID-19 pandemic crisis. The project endeavored to address the gap by discussing the value of PR in audience-centered health care delivery, especially considering the dependence on Internet sources. As such, the following two questions were considered:

RQ1: What traditional PR strategies do American health organizations employ to communicate about vaccines to different U.S. publics?

RQ2: How did those PR strategies change when communicating about the COVID-19 vaccine to priority populations during the pandemic crisis?

Chapter 2

Literature Review

Introduction

Mass media serve as a leading source for directed health behaviors like getting a vaccine (Chen & Stoecker, 2020). The mass media, which encompass newspapers, magazines, radio, and television (Wilcox et al., 2015), significantly impact health knowledge or perceptions of health knowledge (Volkman et al., 2021). Individuals or groups interact with media channels for different reasons. Uses and gratification theory not only analyzes how audiences select the content or communication sources but how they shape the media channels disseminating those messages. Even if a particular media outlet serves as a useful public education tool, the receiving audience can decrease its effectiveness based on a lack of appreciation or acceptance (Dixon & Clarke, 2012). The boundaries of media channels such as the limited amounts of space for technical explanation or competing functions of journalists in sharing new health practices factor into the evaluation of information (Catalan-Matamoros & Peñafiel-Saiz, 2019). In light of the dynamic relationship, this literature review explores the influences of media channels and audiences on public health communication with a particular focus on vaccine messages.

First, the literature review provides an overview of the uses and gratification theory. Then, it focuses on the particular intersection of the theory with health communication, breaking down the difference between uses and gratifications. Later, it explores the qualities of an active audience based on the selection of mass media channels. Finally, the review discusses the function of PR in health messaging, with a special focus on messages grounded in instructions, guidelines or directives. The literature also explicitly highlights studies on vaccine communication.

Methods for Research Inclusion

To begin the investigation, online library databases and Google Scholar were searched for peer-reviewed, academic journal articles that explored uses and gratification theory, vaccine or public health communication, and the use of PR in health messaging. Websites, dissertations, conference papers, and book reviews were not included.

Research primarily included studies on U.S. populations due to changes in public health implementation or needs across countries. For example, diminished resources strain frontline health information workers at state and local government bodies. Those PIOs typically provide directives during health events (Avery & Park, 2019). Therefore, independent communicators like journalists or PR practitioners become more involved in facilitating health interventions. Furthermore, the American population constitutes diverse groups, translating into multiple public identities (Vardeman-Winter et al., 2013). Accordingly, public health behaviors can alter based on social structure or affiliation.

Keywords and phrases like *uses and gratification theory*, *public relations*, *mass* or *traditional media*, and *vaccine* or *health messages* were employed in the search. Of the various academic sources pulled, 15% came from *Health Communication,* 15% from *Journal of Communication in Healthcare*, 6% from *Vaccine*, 6% from *Journal of Health Communication*, and 4% from *Public Relations Review*. The reference list of each article had been scanned as well. Upon further discovery, the original work introducing uses and gratification theory in 1974 had also been retrieved.

Each source has been included based on its investigation of information-seeking behaviors and their posited relationship to public health views or behaviors. When deciding which articles were relevant to use, the following two questions were considered:

RQ1: What traditional PR strategies do American health organizations employ to

communicate about vaccines to different U.S. publics?

RQ2: How did those PR strategies change when communicating about the COVID-19

vaccine to priority populations during the pandemic crisis?

Overview of Uses and Gratification Theory

Uses and gratification theory looks at the way media serves consumers. The uses and

gratification approach explores groups of need in tandem with the particular media sources that

satisfy those needs (Katz et al., 1973-1974). The theoretical framework emphasizes how people

interpret, form perceptions, and determine behaviors (Zhu et al., 2018).

Researchers have used the theory to explain the link between audience involvement and

mass media influence. Several studies apply the approach to how different audiences choose

mass media sources including newspapers, radio, television, and more recently the Internet

(Craig et al., 2013). The studies often analyze the media content. However, few studies focus on

the effects of a specific audience's motivations on a channel (So, 2012).

Katz et al. (1973-1974) identified five elements of the uses and gratifications to consider

in the context of mass communication. The elements include (1) conceiving the audience as

active, (2) linking media choice to the audience member, (3) taking into account competing

sources of need satisfaction, (4) seeking data on mass media use that audience members supply

themselves and (5) suspending value judgments about the cultural significance of mass

communication (p. 510-11).

Levy and Windahl (1984) expanded upon the role of an "active" audience by suggesting that individuals voluntarily enter their communication settings. The authors conducted an empirical study on audience involvement with television. They determined the amount of engagement with an activity surrounding television broadcasts (e.g., eating, doing housework, planning the evening to watch the news, comparing own ideas with reporters, etc.) correlates to the strength of audience need. Accordingly, the type of activity influences the effects of media exposure. In addition, different kinds of rewards exist based on contextual or relational factors. So, members do not equally engage nor participate at the same times (Rubin, 2009).

Rubin (2009) divided the audience's media use into ritualized or instrumental categories to clarify the attitudes and expectations of the consumer who chooses to engage with the channel. Ritualized demonstrates more habitual exposures related to diversion, whereas instrumental reflects purposeful exposure to gain information at a specific point in time. Theaker (2011) points out that audiences do not always engage with a channel to receive the intended message by a communicator. Members of the audience act as involved communicators themselves rather than merely passive receivers (Rubin, 2009).

Intersection of Uses and Gratification Theory and Health Communication

The uses and gratification approach investigates how people get information or recommendations for their daily lives. For studies on health, it provides insights into the specific goals of the audience such as reactive health decision-making, personal risk reduction or chronic disease management (Lee & Hawkins, 2010). Health communication captures the psychological and utilitarian motivations of the audience (Rubin, 2009).

Uses

Uses shape the motivations for seeking information. Media use is "chosen, goal-directed, and motivated" (Walker, 2015, p. 860). Uses often reflect self-perception, which directly informs

the media channels individuals prefer (Yoo, 2013). The most common motivations that influence how people consume information from the media include environmental surveillance, environmental diversion or entertainment and environmental interaction (Newsom et al., 2013). For example, some people engage with the media out of personal necessity more than interest. Zhu et al. (2018) found that the quality and interest of Alpha-1 Antitrypsin Deficiency (AATD) information presented on the National Institutes of Health (NIH) website varied based on patient experience. Generally, participants affected more severely by the disease perceived the information quality and interest as lower. The research findings reinforced the idea that people with rare diseases have difficulty becoming engaged. Individuals or groups tend to use the media for surveillance when uncertainty becomes high (Zhu et al., 2018); however, the increased use of particular media channels does not signal the amount of satisfaction with the information.

Alternatively, some people seek information to enjoy or maintain a positive sentiment. The desire for enjoyment incentivizes audiences to personalize the media content more (So, 2012). For example, a study of health care professionals on social media determined that a majority of respondents viewed social media websites as a personal form of expression and entertainment. Hence, they rarely contributed health information to the community discussion (Craig et al., 2013). The health care personnel automatically separated the adverse emotions that sometimes stem from using media channels as a form of surveillance. However, audiences also consult interactive social media websites to appeal to personal experience and identify with mediated characters presented in the content (So, 2012). So, the literature highlights conflicting needs.

Gratifications

Gratification determines how a media source meets motivations. The consumer feels empowered or gratified when he or she receives knowledge. Gratification measures the appropriateness and effectiveness of channels resulting from the audience activity (Rubin, 2009). Gratifications also vary according to individual factors and social factors. For example, a study of online care pages determined that the communication channel satisfied health users that required more social support. Forms of support included the awareness of being connected with others encountering similar health events or the exchange of prayer, which more traditional health information-seeking platforms could not accommodate. In addition, the increased need for support reflected experiences of serious illness or hospitalization in the United States (Anderson, 2011). Alternatively, a different study on aggregate immigrant e-Health activities in the U.S. showed a decreased interest in social support. Only about 5% of the immigrants from the sample joined an online support group (Zhao et al., 2019). In contrast, nonimmigrants showed an increasing trend in joining online health communities.

Significance of Effective Messaging in Health Communication

Vardeman-Winter et al. (2013) determined that campaigners should "follow publics' leads in defining their identities" (p. 393). Otherwise, particular publics feel ignored or diminished by narrow categories, which impedes their ability to seek meaningful health information. In selecting media channels, audience members signal their nuanced and genuine health needs (Walker, 2015). Media usage intersects with unique audience needs, values and experiences.

Audience Needs

People might seek new information related to the general state of health or their evolving health conditions. Research broadly divides needs expressed in media platforms into cognitive or affective needs. Cognitive needs involve gaining knowledge for informational purposes and the subsequent understanding exchanged. Alternatively, affective needs relate to emotional reasoning, which can be positive or negative (Walker, 2015).

Lee and Hawkins (2010) also presented a third subset of needs known as unmet needs. Unmet needs indicate that the audience members receive and interact with the information; however, they decide it does not adequately fulfill their needs. Those unmet needs may serve as an impetus for individuals to search for an alternative channel. For example, some studies determined that accurate and realistic online health information remains essential for established diseases like cancer, especially considering cancer patients do not accept information unless they believe it will help them cope with their illnesses (Hartoonian et al., 2014; Lee & Hawkins, 2010). Health research typically prioritizes breast cancer over other types (Craig et al., 2013), limiting the exchange of practical information. Zhu et al. (2018) concluded that personal characteristics shape how individuals take in information. As such, general approaches to education can deter users who desire more mediated or interpersonal sources of health information (Dixon & Clarke, 2012). Depending on the level of engagement, the information seekers feel more proactively involved in managing their physical and emotional health status (Zhao et al., 2019). The most successful health care interventions differentiate distinctive unmet information or support needs (Hartoonian et al., 2014).

Audience Values

Values can impact the types of media channels users find appropriate to use. Some users prioritize interpersonal platforms for health information because they can fulfill religious or service-oriented preferences like sharing resources, caring for others, and providing hope during uncertain times or a health care event (Anderson, 2011). They feel attracted to media outlets that reinforce their values or attitudes (Rubin, 2009).

Health sources or organizations not presenting enough information for health decision-making may conflict with audience values. For example, Yoo (2013) determined that the entertainment value afforded by the American reality show, *The Biggest Loser*, reinforced negative perceptions that weight fluctuates based on personal lifestyle choices. American public health organizations also disseminate a lot of messages centered around self-regard and personal identity. For example, the U.S. Department of Health and Human Services and the U.S. Department of Agriculture publish individual diet guidelines every five years (Newsom et al., 2013). More specifically, the Centers for Disease Control put out recommendations encouraging retailers and health care professionals to help Americans reduce sodium in their diets after the U.S. Food and Drug Administration released a concerning report. The report caused a massive response in the health and food industries, including food labeling and menu information (Newsom et al., 2013).

Audience Experiences

Individual experiences characterize the amount of interaction with health information as well. Researchers have started to study behaviors related to lesser-known illnesses and conditions. For example, a study on consumer health webpages about thoracic outlet syndrome found the websites did not uniformly represent the nuances of the disease. The inconsistencies

discouraged patients who wanted to gain certainty in a long diagnosis process (Walker, 2015). In general, people with rare diseases report difficulty engaging as patients due to a lack of quality information (Zhu et al., 2018).

Moreover, abnormal health experiences increase motivations for seeking health-related information. For example, Patterson et al. (2015) determined that patients, who did not have immediate access to their health care professionals, turned to the Internet for information on irregular newborn blood screening experiences. Due to the changes in quality among websites and differences in online search skills, parents in the sample flagged various complaints. Accordingly, positive or negative experiences related to channel use among concerned patients can intersect with emotions caused by the health condition itself.

Personal experience and relationships also tie directly to sensitivity towards health issues. In a study by Powell et al. (2016), the authors suggested that areas with higher measles outbreaks altered media content's character about the measles vaccine. For example, U.S. states with more measles cases were more likely to report about unvaccinated populations. Anderson (2011) also conducted a study on CaringBridge, a service that provides personalized web pages based on the types of clients the service helps. Relevant groups included people experiencing childbirth, adoption, hospice care, hospitalization, military development or other unique care situations. These groups were more likely to experience difficult health discussions or personal problems. Some studies point out that younger generations encountering rarer incidents of common diseases based on previous vaccination rates do not feel the same sense of urgency about vaccination (Catalan-Matamoros & Peñafiel-Saiz, 2019).

Traditional PR

Traditional PR involves reaching different publics through traditional or legacy media. Traditional media refers to the uni-directional media institutions that dominated the second half of the twentieth century (Newsom et al., 2013). Relevant media channels include television, radio, newspapers, magazines, medical journals, books, pamphlets, and movies (Catalan-Matamoros & Peñafiel-Saiz, 2019). Even though they qualify as newer digital media, websites also demonstrate a similar communication model, unlike interpersonal communication spaces like social media forums (Newsom et al., 2013).

Traditional media presents information for audiences to process. These outlets often rely on basic news releases for their familiar format and easily extracted information (Wilcox et al., 2015). Typical organizational formats include persuasive or advocacy messages (Newsom et al., 2013). In addition, traditional channels benefit from more perceptions of trust and credibility, considering their consistency in information presentation (Park et al., 2019).

In contrast, digital media channels usually get associated with perpetuating misinformation (Piltch-Loeb et al., 2021). Newer digital forms like organization-controlled webpages or media pages allow recipients to repurpose and use new information for their ends. However, websites also risk losing control of the content, which poses broader implications for information accuracy and reputation management (Theaker, 2011).

Function of PR in Generating Effective Messaging

PR plays a role in a specific audience's information-seeking behaviors. Park et al. (2019) suggested that people select different channels based on an intent to follow directions. Traditional channels in particular offer a sense of constancy in rapidly changing health

environments (Park et al., 2019). However, the absence of contextual information can also hinder the acceptance of guidelines by laypeople or undecided groups (Catalan-Matamoros et al., 2019).

Competing functions of the media interfere with information reliance. The watchdog role of journalists sometimes obscures the guidance function of the press. For example, in the autism-vaccine controversy, journalists compared past failures to report health risks to current claims on vaccine safety (Clarke, 2011). Focusing on the call to action overshadows informational objectivity. Similarly, journalists also juggle norms and social forces that dictate the appropriate ways to communicate with the public. For example, falsely balanced news coverage increased audience uncertainty about links between vaccines and autism; however, journalists feel more incentive to present evidence that supports risk viewpoints (Dixon & Clarke, 2012). Other behaviors that demonstrate environmental concerns (e.g., institutional accountability) coexist with information-seeking needs.

Consumers also consult information sources that do not necessarily indicate their specific health beliefs. For example, Cataldi et al. (2016) studied the impact of the 2014-15 measles outbreak on new mothers. They identified a difference between the most used media outlets by the mothers compared with the most trusted ones. In so doing, exposure to those types of media channels can impact underdeveloped opinions about a health issue. In another example, Dixon and Clarke (2013) studied the impact of a one-time exposure to a controversial news article on 320 undergraduate students. The authors determined that participants were more likely to label experts as divided on the vaccine-autism link due to the presence of opposing sides. Another study concluded that weight-of-evidence impacts participants with incomplete knowledge of a vaccine. However, the article suggested researchers should conduct more studies on the types of

platforms that could amplify weight-of-evidence messaging (Clarke, McKeever, Holton & Dixon, 2015).

Accordingly, health organizations can use PR professionals as mediators for health-specific instructions or recommendations. PR practitioners often need to "know or have the educational background to learn about medical science to translate that information accurately for the organization's publics" (Newsom et al., 2013, p. 13). In addition, journalists may have to rely on PR practitioners to incorporate evidentiary balance related to health and science issues considering it can shape health beliefs (Clarke, Dixon, Holton & McKeever, 2015).

History of Vaccine Communication

Research has focused on communication about vaccines in traditional U.S. media for the past ten years. Many of the studies center around the human papillomavirus (HPV) vaccine (Catalan-Matamoros & Peñafiel-Saiz, 2019). However, some literature studies attitudes towards older vaccine technologies like mumps-measles-rubella and influenza vaccines (Catalan-Matamoros et al., 2019). The literature typically evaluates the most trusted sources of vaccine information and the amount of influence they have on audience knowledge or behaviors.

Critical events or developments can amplify the interest surrounding a vaccine. Kelly et al. (2009) found that a general increase in media coverage surrounding the FDA approval of the HPV vaccine in 2006 did not signal the quality or consistency of the information. However, the increase in media articles corresponded to a greater quantity of knowledge on the HPV health issue. Johnson et al. (2011) added to the conversation by suggesting that incomplete knowledge impacts views of behavioral risks. An analysis of U.S. newspaper articles in the 19 months following FDA approval of the HPV vaccine demonstrated a limited understanding of HPV as the most common sexually transmitted infection (STI). The researchers established three

fundamental communication periods surrounding the vaccine event instead of simply evaluating coverage following federal approval. By adding the temporal element, the authors discovered a consistent pattern, where news articles framed the vaccine as a preventative tool for a relatively rare cancer (cervical cancer).

Moreover, increased media coverage can initiate some behavioral responses beyond receiving or denying a vaccine. An increase in media reports surrounding the HPV vaccine positively correlated to a rise in the number of reports submitted to the Vaccine Adverse Event Reporting System (VAERS) database, an open public resource jointly maintained by the CDC and FDA (Eberth et al., 2014). The researchers also discovered that VAERS reporting remained high even after a reduction in print coverage due to sustained interest from the public. The research did not focus on the particular content of the media reports.

Trust and autonomy emerge as primary audience concerns in vaccine communication. Barriers to trust and autonomy can create negative feelings towards vaccination in general. St. John et al. (2010) found in an analysis of local Virginia newspapers that parents did not have access to balanced information needed for informed decision-making about the HPV vaccine. Instead, the coverage prioritized institutional voices and concerns rather than appealing to private interests. Institutions often conflict with personal autonomy. Accordingly, the authors narrowed the scope of the study to Virginia since it functioned as the first state to mandate the HPV vaccine (St. John et al., 2010). In another study, researchers analyzed publicly available documents in South Carolina on the HPV vaccine (Sundstrom et al., 2018). The research focused on South Carolina since the population lagged in HPV vaccination rates, indicating vaccine uptake barriers. The results suggested that fears about vaccine safety and the potential to increase

sexual activity were incompatible with the state population's existing values such as conservative social values (Sundstrom et al., 2018).

Media coverage of contentious issues also surfaces negative emotions that do not always relate to the substance of the vaccine guidelines. A series of studies in 2014 looked at media coverage of controversial stances that arose with the HPV vaccine. The media did not offer standard preventative measures in which the HPV vaccination poses one option (Casciotti, Smith, Tsui & Klassen, 2014). Instead, articles honed in on fear factors. Print news articles from 2005-2009 also focused on disapproval surrounding vaccine mandates or legislation, obscuring the pro-vaccine tone held by a majority of the news stories. 61% of the articles pulled from 2007 concentrated on government or state activities and most of the negative stories published during that year (Casciotti, Smith & Klassen, 2014). Major U.S. newspapers that used government-sponsored views or sources created negative associations with vaccination programs, considering distrust of government activities (Casciotti, Smith, Andon, Vernick, Tsui & Klassen, 2014).

The media also tends to concentrate on a specific vaccine effect or component. Hussain et al. (2011) determined that most print media coverage on vaccine safety over ten years did not direct readers to additional information resources. Krakow and Rogers (2016) also found coverage of the events surrounding the HPV vaccine overshadowed key recommendations for different demographic groups like boys and men. The media acknowledged the needs of the general public but failed to triage the information for certain uninformed publics. Vaccine communication can also fail to represent the tension between population experiences with the public health system and pro-health behaviors like vaccination (Avery & Lariscy, 2014).

Role of PR Expert in Vaccine Communication

Vaccine communication typically centers around disease outbreaks and response. Pandemics create severe effects like economic harm, mental health issues, and death from illness (Allington et al., 2021). Many of the vaccine reports distributed by the media tend to be more negative and lower in information quality (Catalan-Matamoros et al., 2019). As such, PR practitioners play a role in providing a holistic understanding of vaccination policies or programs.

Fluctuations in news topics disturb informational reliance. For example, traditional and social media channels cover the latest developments in new health technology like a vaccine with more regularity. A study on MMR vaccine information determined only 34% of respondents consulted traditional media from a doctor's office despite 60% of respondents indicating high levels of trust in the information (Cataldi et al., 2016). Following the start of the coronavirus (COVID-19) vaccine rollout, a recent study also found no significant relationship between the type of media channel consulted and trust. The authors suggested future studies should analyze the relationship between trust and the kind of information or sources (e.g., public health officials and academic leaders). PR experts can access those experts (Piltch-Loeb et al., 2021). Allington et al. (2021) further determined that social media does not adequately replace COVID-19 vaccine information and can hinder informational reliance by diverting attention away from traditional media sources.

Changes to the perception of risk and safety also impact information priorities. Vaccines involve injecting a substance into the human body that can create specific effects or reactions. Accordingly, the publics that need instructional messages evolve over time. Research suggests that mass media sensationalizes stories about harm more. Nan and Daily (2015) determined that

negative anecdotal information overshadowed positive anecdotes in mixed blogs on the HPV

vaccine. Margolis et al. (2019) also found that HPV vaccination rates were more strongly

associated with personal stories about harm than ones about preventive benefits. Parents in the

sample also reported receiving information on HPV vaccine-preventable diseases through

conversation the most. In a study of college-age students and vaccine perceptions, students cared

about perceived risk and safety before perceived knowledge. The students found social media

better suited those interests and ultimately increased their risk of exposure to the damaging

effects on vaccine perceptions (Volkman et al., 2021).

Considering news about vaccines usually includes some form of instructions,

practitioners must also consider how the depth of information translates differently across

channels. A print or printable medium like a website captures detail better and provides more

clarity during health situations (Newsom et al., 2013). According to Theaker (2011), websites

can also be "particularly useful in crisis situations - but if a company doesn't have a site that acts

as an adequate information resource, people will seek (possibly inaccurate) comment from other

sources" (p. 234). Even unfamiliar authors that post negative information on blogs can impact

vaccination views (Nan & Madden, 2012). Alternatively, other research found that engaged

processing routes like social media or interventions from a school or employer served as better

predictors of intention to get vaccinated against swine flu. Although the study investigated

underserved populations that might encounter personal constraints (e.g., English as a second

language or low-income status), the results remained consistent for initiating pro-health behavior

(Avery & Lariscy, 2014).

Vardeman-Winter (2011) also added a relatively understudied area of vaccine

communication that looks at the intersection between need and health identity when evaluating

HPV vaccine information. After analyzing how women from different racial and ethnic backgrounds received health campaigns, the author advocates for using PR to combat reductionist assumptions related to general health topics. Issues of identity also clarify some of the motivations for audience members, who consider functional alternatives for public health information. The functionality of media channels permits users to enact their preferences and gratify needs. However, specific individuals or groups may depend on a channel, restricting their ability to address their needs (Rubin, 2009). For example, factors like user-friendliness or appeals to lived experience (e.g., cultural differences or inactive health decision-making) impact access to health information from a surveillance and interest perspective (Vardeman-Winter, 2011). In those situations, the relationship between media and audience influence becomes unequal and disempowers audiences.

Summary

After reviewing the literature, a gap emerged in vaccine studies. Katz et al. (1973-1974) suggested that future research should move beyond a "charting and profiling activity" (p. 514) that categorizes media channels based on the types of audience needs they satisfy. Vaccine communication involves disseminating guidelines and directed behaviors that often impact the participants' quality of life at the time. Thus, audience needs do not function as static. In addition, the inability to address genuine health needs in the context of the current public health environment exposes populations to vulnerability.

When narrowing the focus to vaccine studies, the literature identifies three aspects that characterize vulnerable populations seeking health information. First, Park et al. (2019) found that people with low preparedness and low intention to follow directives consulted television news, health department websites, and friends or family for information the most. The authors

label members of those groups as more vulnerable based on their exposure to less controlled information. Second, Avery and Park (2019) indicated that American population groups could be susceptible to health emergencies and crises due to dwindling resources for U.S. public health organizations. Finally, Piltch-Loeb et al. (2021) noticed that populations could be vulnerable to general or inaccurate information on mass media platforms that allow for audience customization. Perceived personal risk functions as a form of vulnerability (So, 2012). As such, the literature reinforces the significance of targeting individual needs, which consider context and relationships.

Moreover, few academic studies exist that look at the uses and gratification theory and vaccination communication in the United States. One thesis had been identified on sharing vaccine news on Facebook. A few studies employ a uses and gratification approach to vaccine behaviors related to racial and ethnic groups that display specific attributes or homogeneous characteristics. However, the diversity of the U.S. population creates a variety of positions on health management. These positions can conflict when getting the audience to follow a specific health behavior like getting vaccinated.

In general, previous vaccine studies demonstrate that audiences seek meaningful information that incorporates discussion of potential benefits or drawbacks of a vaccine for informed decision-making (Casciotti, Smith, Andon, Vernick, Tsui & Klassen, 2014). Media channels tend to misrepresent or overemphasize events, components, and effects related to vaccines. Vaccine messaging should constantly assess compatibility with a target audience's needs (Sundstrom et al., 2018), which can shift with increased understanding. Volkman et al. (2021) pointed out that vaccine hesitancy can surface by omitting details like how many vaccines individuals need to get. Unclear guidelines conflict with other beliefs like the 'lay theory of

immunity' (p. 52). Certain focal points can similarly oppose trust and autonomy, two primary audience concerns. To gain a clearer understanding of the representation and fulfillment of different audience needs, the following two questions were formed:

RQ1: What traditional PR strategies do American health organizations employ to communicate about vaccines to different U.S. publics?

RQ2: How did those PR strategies change when communicating about the COVID-19 vaccine to priority populations during the pandemic crisis?

The iterations of a vaccine intervention can impact the force of the message. Individuals often switch mediums if they decide the channel does not adequately satisfy relevant needs. Accordingly, PR practitioners can follow up on audience concerns after they interact with the initial message. Such a reactive process diverges from the role of a one-time communicator like a journalist. In that way, practitioners may be better suited to respond to rapid changes in the health environment and serve as active participants in a dynamic search for health information (Park et al., 2019).

The remaining chapters describe the researcher's process of expanding on these preliminary themes to inform a comparative case study, which will be detailed in Chapters 4 and 5. The following chapter, Chapter 3, will outline the methodology used to investigate the research question and the parameters selected to narrow the scope of the study.

Chapter 3

Methods

Introduction

This research project investigated the best PR strategies health authorities can use to communicate about vaccines, with a particular focus on disseminating information about the novel COVID-19 vaccine to priority populations. A qualitative comparative case study of three American public health organizations was conducted to see how frontline organizations in a public health event can effectively deliver developing information. In the previous literature review, the research suggested that vulnerable groups or members who display low preparedness and additional health care needs consult health department websites. As such, the three organizations selected for study included the CDC, APHA, and HCA Healthcare.

Statement of the Problem

Little research exists on the role of current PR professionals in communicating evolving public health information like vaccine response. Trust in health authorities mediates vaccine decision-making (Krishna, 2017). Research should understand how active audiences interact with data or information from these organizations. In that way, PR professionals can better support the dynamic needs of receivers and help direct communication efforts surrounding new health care delivery. As such, the method sought to answer the following questions:

RQ1: What traditional PR strategies do American health organizations employ to communicate about vaccines to different U.S. publics?

RQ2: How did those PR strategies change when communicating about the COVID-19 vaccine to priority populations during the pandemic crisis?

Method Description

A comparative case study, complemented by textual analysis, served as the most appropriate method to determine the PR strategies used in mass media materials disseminated by American health organizations. The case study was grounded in the pandemic and the mass rollout of the coronavirus (COVID-19) vaccine in the United States, which began in December 2020 (Loftus & West, 2020). The time and place boundaries helped narrow the scope of the study (Creswell & Poth, 2018).

A *comparative case study* uses more than one case "in a way that produces more generalizable knowledge about causal questions—how and why particular programmes or policies work or fail to work" (Goodrick, 2014, p. 1). Comparative case study had been chosen because it complements the researcher's focus on a process within an organization (Allen, 2017) or the different approaches to health communication during a health event. In addition, the strength of a case study method lies in its ability to "make possible a micro versus macro perspective" (Denzin & Lincoln, 2018, p. 603). The multiple data sources allow the researcher to check answers to causal questions through triangulation rather than simply rely on descriptions of the attributes in one case (Goodrick, 2014).

Textual analysis helps the researcher implement an interpretation scheme in "a realm of informed application of thought" (Allen, 2017, p. 1754) and better focus the efforts of the study (Coleman & Major, 2014). *Textual analysis* is a method that seeks to understand "language, symbols, and/or pictures present in texts to gain information regarding how people make sense of and communicate life and life experiences" (Allen, 2017, p. 1753). A textual analysis allows the researcher to analyze the messages found within the mass media materials. The process involves

examining the content of each case to illuminate the various realities of the participants (Haley et al., 2011).

A comparative case study usually involves six stages: (1) clarifying the purpose of the evaluation (2) identifying initial propositions or theories (3) defining the type of cases and case study process (4) identifying how evidence will be collected, analyzed and synthesized (5) considering alternative explanations for outcomes and (6) reporting findings (Goodrick, 2014). As part of the data collection stage, a textual analysis was also conducted. Textual analysis often involves: (1) reading the data intensively (2) building the coding frame (3) coding the data (4) analyzing the coded data and (5) presenting the results (Kuckartz, 2019). The analysis requires a system of *coding*, which converts the information or observations into a set of "meaningful, cohesive categories" (Allen, 2017, p. 143). The coding helps to construct a schema of interpretation and organize findings.

Data Collection

To collect the data, the research focused on textual data from three organizational websites. The information selected for each case consists of two commonly used PR tactics to communicate with external audiences: news releases and social media posts. Traditional PR relies on news releases due to their ability to package information for processing by external viewers. In particular, they accommodate media organizations that cannot have staff dedicated to specific subjects (Wilcox et al., 2015). Additionally, reliance on triaged, mobile-friendly content amplifies the impact of organizational social media pages as sources of news and information (Wilcox et al., 2015). The text primarily provided information about the COVID-19 vaccine for both sets of documents. One key date was selected to narrow the number of textual materials.

Data was pulled from December 2020, the month the first U.S. COVID-19 vaccine shots were administered (Neergaard, 2020).

The organizations of examination were the CDC, APHA, and HCA Healthcare. These organizations were selected because they were identified by American survey respondents as the most trusted messengers of vaccine information or defined as leading organizations dedicated to public health protection in the U.S (Dyrda, 2020; Hamel et al., 2020). In addition, these units of study demonstrated active involvement in COVID-19 vaccine communication geared towards a diverse U.S. population; however, they did not present a specific pro-vaccination or anti-vaccination agenda.

The CDC was chosen due to its status as the nation's health protection agency. According to the website, the CDC functions as "the nation's leading science-based, data-driven, service organization that protects the public's health" (About CDC 24-7, n.d., para. 2). In line with the agency's commitment to population protection, the CDC provides tools and resources to reduce disease impacts, which involve vaccine information. The website contains a dedicated subpage for COVID-19 vaccines. The page displays call-to-action links for vaccination landing pages, specific web stories triaged by special interest groups (e.g., personal, children and teens, and health care workers), and different language translations of the mass media materials.

The APHA was further selected due to its dedication to improving public health infrastructure. According to the website, it functions as "the nation's leading public health organization [that] strengthens the impact of public health professionals and provides a science-based voice in policy debates" (Our Mission, n.d., para. 3). The organization empowers health care professionals to educate about conditions needed to be healthy, including vaccination coverage. In fact, the Census Bureau's 2019 American Community Survey determined that the

health care industry accounts for 14% of U.S. workers and is the fastest-growing sector in the country (Laughlin et al., 2021). The APHA offers a dedicated subpage for COVID-19 vaccines. The page primarily links to outside news stories from other health actors like the CDC, the FDA, and the Kaiser Family Foundation. However, the website provides mass media materials written by APHA about the COVID-19 vaccine in other locations.

Lastly, HCA Healthcare was identified due to its position as the largest health system in the United States (Dyrda, 2020). According to the website, it functions as "one of the nation's leading providers of healthcare services" (Who We Are, n.d.). Health care systems serve as coordinators of care, which incorporates vaccine services. HCA Healthcare does not feature a dedicated subpage for vaccine information. The website features mass media content in miscellaneous places like a "COVID-19 Vaccine Podcast" on YouTube that can be found in the COVID-19 "Resource Hub."

Data Analysis

The categories for coding were guided by a uses and gratification theory framework. First, textual materials were organized and labeled by the specific PR tactic (news releases or social media posts) across all three cases. Then, preliminary data were collected through written notes and memos, specifically focused on developments in or reiterations of COVID-19 vaccine information. Memoing produces "a visual road map of a researcher's theoretical decision making, conclusions, thought processes, and queries" (Allen, 2017, p. 81). The aggregated data was organized into an Excel spreadsheet. Data analysis occurred over four months, from December 2021 to March 2022.

Coding Categories

Codes were isolated through code landscaping. Code landscaping combines textual and visual methods to determine the most salient words and elucidate potential codes or categories (Saldaña, 2013). Coding consisted of color-coded highlighting and annotations in the form of comments. The codes captured key messages reflected in the PR tactics, specifically focusing on any concerns related to priority populations. In line with the theoretical framework, the following themes were selected: *audience needs*, *audience values*, *audience experiences*, *population identifiers*, and *traditional public relations*.

Audience Needs

Audience, as defined by the New Oxford American Dictionary online, is "the people giving or likely to give attention to something" (Audience, n.d.). Need, as defined by the New Oxford American Dictionary online, is "a thing that is wanted or required" (Need, n.d.). According to Rubin (2009), needs involve "strengthening or weakening connections with self, family, or society" (p. 168).

Audience Values

Audience, as defined by the New Oxford American Dictionary online, is "the people giving or likely to give attention to something" (Audience, n.d.). Values, as defined by the New Oxford American Dictionary online, is "a person's principles or standards of behavior; one's judgment of what is important in life" (Values, n.d.). According to Katz et al. (1973-1974), value reinforcement links to personal identity.

Audience Experiences

Audience, as defined by the New Oxford American Dictionary online, is "the people giving or likely to give attention to something" (Audience, n.d.). Experience, as defined by the

New Oxford American Dictionary online, is "practical contact with and observation of facts or events" (Experience, n.d.). According to Rubin (2009), experiences and attitudes impact media perceptions.

Population Identifiers

Population, as defined by the New Oxford American Dictionary online, is "a particular section, group, or type of people or animals living in an area or country" (Population, n.d.). Identify, the root word of identifier and as defined by the New Oxford American Dictionary online, is "establish or indicate who or what (someone or something) is" (Identify, n.d.).

Traditional Public Relations

Traditional, as defined by the New Oxford American Dictionary online, is "habitually done, used or, found" (Traditional, n.d.). Public relations, as defined by the New Oxford American Dictionary online, is "the state of the relationship between the public and a company or other organization or a famous person" (Public relations, n.d.).

Limitations of the Study

The case study method can conflict with the researcher's need for generalizability in recreating the study design (Allen, 2017). The decision to use more than one case comes with some practical limitations. First, the data collection and analysis remain limited to the time and resources of the researcher, which can cause some shortcomings in the data. Additionally, multiple cases can dilute the overall analysis and quality of the understanding of each case compared with a single case approach (Creswell & Poth, 2018).

In a textual analysis, the analysis can lack depth or breadth. The researcher becomes responsible for identifying key themes and constructing the cultural world in which the textual material takes part (Denzin & Lincoln, 2018). A researcher who does not investigate the text's

broader context can risk surface-level analysis (Allen, 2017). Similarly, the criteria for meeting the needs of understanding can be limited to time and resources.

Summary

This study focused on vaccine communication efforts by American health organizations in three sectors: public, private, and nonprofit. A comparative case study combined with a textual analysis was selected to gather data. The methodology emerged as the most appropriate to answer the following research questions:

RQ1: What traditional PR strategies do American health organizations employ to communicate about vaccines to different U.S. publics?

RQ2: How did those PR strategies change when communicating about the COVID-19 vaccine to priority populations during the pandemic crisis?

The scope of the study represented a tri-sector approach in the U.S. (Lovegrove & Thomas, 2013), which demonstrates the potential leadership role of PR practitioners across sectors. The units of study (American health organizations) were also chosen due to their shared interest in promoting a specific public health behavior (Evans et al., 2019)—getting the vaccine. The cases demonstrated how these organizations leverage their institutional websites to initiate behavioral and social change during a rapidly evolving health event. Accordingly, thematic interpretations of the cases are presented in Chapter 4. A discussion of the broader implications of those findings and recommendations follow in Chapter 5.

Chapter 4

Findings

Introduction

The earlier literature review in Chapter 2 found that many studies track vaccine communication pieces as part of a "charting and profiling activity" (Katz et al., 1973-1974, p. 514) rather than focusing on how those materials disseminate guidelines, directed behaviors, and resources. Additional research in Chapter 2 also revealed that people with low preparedness seek out health department websites for meaningful information, a signposting function often attributed to traditional PR. As such, an investigation should focus on how materials utilize PR to engage audiences based on their needs. Accordingly, the following research questions were developed:

RQ1: What traditional PR strategies do American health organizations employ to communicate about vaccines to different U.S. publics?

RQ2: How did those PR strategies change when communicating about the COVID-19 vaccine to priority populations during the pandemic crisis?

To answer these two questions, the research project used a comparative case study and textual analysis to investigate the types of audience-centered and traditional PR strategies. The investigation reviewed three specific public health organizations in the United States to narrow the scope further. Three cases were used: CDC, APHA, and HCA Healthcare. Textual materials consisted of news releases and Facebook posts. The news releases were copied over from the

three organizational websites. Posts were retrieved from the verified Facebook page archive. As

of March 2022, the CDC Facebook page has 4.2 million followers, the APHA Facebook page

has 127,610 followers, and the HCA Healthcare Facebook page has 37,273 followers.

Additionally, the two tactics were observed in December 2020–before and after the official

rollout of the COVID-19 vaccine on December 14. The December 14 date reflected the

challenge highlighted by Park et al. (2019) of quickly getting to the different populations with

accurate safeguarding health information.

     Based on uses and gratifications theory, the coding categories that arose included:

Audience Needs, *Audience Values*, *Audience Experiences*, *Population Identifiers*, and

Traditional PR (see Table 4.1). During a comparative analysis of the cases, additional themes

emerged.

     This chapter breaks down the three cases further into individual themes based on the pre-

established coding scheme outlined in Table 4.1. First, the analysis presents PR strategies before

the COVID-19 vaccine's December 14, 2020 rollout (starting December 1). Then, it represents

those in the period after the rollout (ending December 31). Finally, it concludes with a cross-case

comparison of similarities or differences across themes. The analysis also incorporates word

clouds, differentiated by the organization's official color palette.

Table 4.1

Coding Categories

Audience Needs	Audience: "the people giving attention" (Audience, n.d.) Need: "a thing wanted or required" (Need, n.d.)
Audience Values	Audience: "the people giving attention" (Audience, n.d.) Values: "principles or standards of behavior" (Value, n.d.)
Audience Experiences	Audience: "the people giving attention" (Audience, n.d.) Experience: "practical contact with and observation of facts or events" (Experience, n.d.)
Population Identifiers	Population: "particular section, group or type of people" (Population, n.d.) Identify (root word of identifier): "establish or indicate who or what (someone or something) is" (Identify, n.d.)
Traditional PR	Traditional: "habitually done, used or found" (Traditional, n.d.) Public relations: "the state of the relationship between the public and a [organization]" (Public relations, n.d.)

Findings on Traditional PR Strategies for American Health Organizations

To determine the change in PR strategies across the three American public health organizations, the findings were broken down into the period before the COVID-19 vaccine rollout and after the COVID-19 rollout.

Before the COVID-19 Vaccine Rollout

The news releases and Facebook posts included in the pre-rollout sample reflect any materials published between December 1, 2020 and December 14, 2020 by the three American public health organizations.

CDC

Preliminary CDC Facebook posts often focused on *Audience Needs* through language like limited and authorized. Those adjectives indicated prerequisites, which separated out segments of the American population. In addition, the CDC posts used *Population Identifiers* such as "healthcare personnel" (CDC, 2020) or "people in long-term care facilities" (CDC, 2020) to designate early recipients of the vaccine. Consequently, the CDC post with the least number of reactions, comments, and shares from the pre-rollout investigation period included a combination of those two elements.

Moreover, the government health organization signaled changes to guidance by incorporating advocacy-based *Traditional PR.* Examples included forms of recommend and advise. These verbs encouraged the public to participate in the health action (getting vaccinated) by reinforcing that the CDC openly supports the action. The Facebook posts and news releases also repeatedly stressed that the materials reflect direction from a group of in-house or affiliated experts. The words experts and authorized came up three times. However, the CDC post with the most engagement in the pre-rollout period educates on the science behind the mRNA vaccine. It appeals to *Audience Values* by suggesting the medical technology functions as a pathway toward "immunity to the virus" (CDC, 2020).

Figure 4.1

Word Cloud Depicting the CDC Facebook Posts

(Transform Data, n.d.)

APHA

Early APHA posts focused on *Audience Values*. For example, the word hopeful appeared in APHA Facebook posts and news releases three times. To paint a picture of the current environment and emphasize the human impact, the APHA also added vivid adjectives like deadly and devastating in its first news release before the rollout (American Public Health Association, 2020). The early APHA releases and Facebook posts also contained more *Population Identifiers* related to priority populations, mainly focusing on at-risk people and minority communities. Accordingly, the pre-rollout APHA post with the most engagement directs readers to a discussion on the "role of minority health professionals" sponsored by an external source, "BlackDoctor.org" (AmericanPublicHealthAssociation, 2020). Those two

components clarify the impact for a specific Priority Population rather than the broader American nation.

Alternatively, the APHA post with the least reactions and shares in the pre-rollout sample labeled the vaccine's arrival as a "hopeful turning point in battle" (AmericanPublicHealthAssociation, 2020) against the virus. Beyond the short appeal to *Audience Values*, the post provides no further audience-centered information (e.g., special instructions or behaviors). Instead, similar to many other posts published in the pre-rollout investigation period, it navigated readers to a blanket resource published on the APHA website or sponsored by the organization.

HCA Healthcare

Before the vaccine rollout, HCA Healthcare did not publish any content on its company website or its official Facebook page. The private health system also did not release any press releases during the period under investigation.

After COVID-19 Vaccine Rollout

The news releases and Facebook posts included in the post-rollout sample reflect any materials published by the three American public health organizations between December 14, 2020 and December 31, 2020.

CDC

Later CDC Facebook posts prioritized *Audience Values* by emphasizing the safety of getting a vaccine. The CDC Facebook posts and news releases also converted a shared geographical identity into a value. They tie the availability of and ability to get a vaccine to living in the United States. Following the vaccine rollout, more releases and posts emphasized using the vaccine as a form of protection, focusing on Priority Populations like the elderly,

people with underlying medical conditions, and immunocompromised people. One CDC

Facebook post even introduced a Priority Population not mentioned before, "newborns" (CDC,

2020).

Rather than highlighting information related to vaccinated persons or people in the

process of receiving vaccines, the CDC often used its post-rollout Facebook posts and releases to

inform readers on the vaccine as a medical technology. Health terminology like side effects,

adverse events, and dose appeared numerous times throughout the content. Following the rollout,

the CDC posts with the least engagement promoted an open public meeting on the vaccine with a

CDC director and physician. The "updates on the current status of COVID-19 vaccines" (CDC,

2020) deflected from audience-centric information. In contrast, the Facebook post with the

highest engagement reflected *Audience Experiences* by chronicling a report of anaphylaxis from

a health care worker. The post also pledged to be "transparent in its communications with the

public" (CDC, 2020) on other safety-related events.

APHA

In later APHA Facebook posts and releases, the organization transitioned to *Traditional

PR* using vocabulary like access, expand, and effective. In particular, the organization offered

signposts for consumers seeking vaccine awareness. The post-rollout Facebook posts connected

to broader audiences by showing external resources–ranging from television networks to health

foundations.

The nonprofit also reiterated its support for reaching as many Americans as possible. As

such, the APHA post with the most reactions, shares, and comments presented a resource to that

effect. The one-line post, which occurred after the vaccine rollout, stated: "New poll identifies

effective language for reaching all Americans on COVID-19 vaccination:

http://debeaumont.org/covid-vaccine-poll" (AmericanPublicHealthAssociation, 2020). The post

encouraged readers to access an infographic provided by the de Beaumont Foundation. The

distribution of the material demonstrated a more tangible impact in reaching audiences. It also

had 199 shares, three times the amount of the second most shared APHA post.

Figure 4.2

Word Cloud Depicting the APHA Facebook Posts

(Transform Data, n.d.)

HCA Healthcare

  HCA Healthcare only used Facebook posts to communicate about the COVID-19 vaccine

in the defined period. All the posts occurred after the official vaccine rollout date. Generally,

HCA Healthcare displayed *Audience Experiences*. The posts included the word first five times,

especially to mark colleagues that received their first doses. The organization also acknowledged

that its actions (e.g., protecting, informing, becoming vaccinators) functioned as a more

significant effort toward its communities. The private health system employed a softer verb–

"ask" (HCACare, 2020)–in the Facebook post with the most reactions, shares, and comments.

The post requested audiences continue to protect their communities by observing standard

COVID-19 protocols while awaiting future guidance on vaccine distribution.

In addition, HCA Healthcare evoked a new phase of the health event and a new state of

existence (post-pandemic). Accordingly, the private health organization primarily engaged

Audience Values and *Traditional PR* through hashtags, including #EndThePandemic and

#HealthierTomorrows (*HCA Healthcare*, n.d.). The posts also included insights into how the

vaccines work, with logistical language like shipment and distribution, and framed those insights

as part of a historic health care delivery moment. In particular, one Facebook post used the

phrase "a pivotal moment for us all" (HCACare, 2020) to indicate a different stage.

Figure 4.3

*Word Cloud Depicting the HCA Healthcare Facebook Posts*

(Transform Data, n.d.)

Comparative Analysis

The three public health organizations published 35 news releases and Facebook posts in total. The two days with the most communication–December 18 and December 22–were published after the official vaccine rollout. Across all three organizations, the post with the most engagement on Facebook came from the CDC on December 16, 2020 in response to a health care worker that reported "a serious allergic reaction" (CDC, 2020) to the Pfizer-BioNTech vaccine. The post garnered the most reactions, shares, and comments in the full December 2020 investigation period. The top post with the most engagement for each organization respectively occurred after the rollout. To visualize the social media posts with better reach, Figure 4.4 shows the number of shares for all Facebook posts in the sample. Days with an "a" designation represent more than one post on the same day.

Figure 4.4

Bar Chart Depicting the Number of Facebook Shares Across Organizations
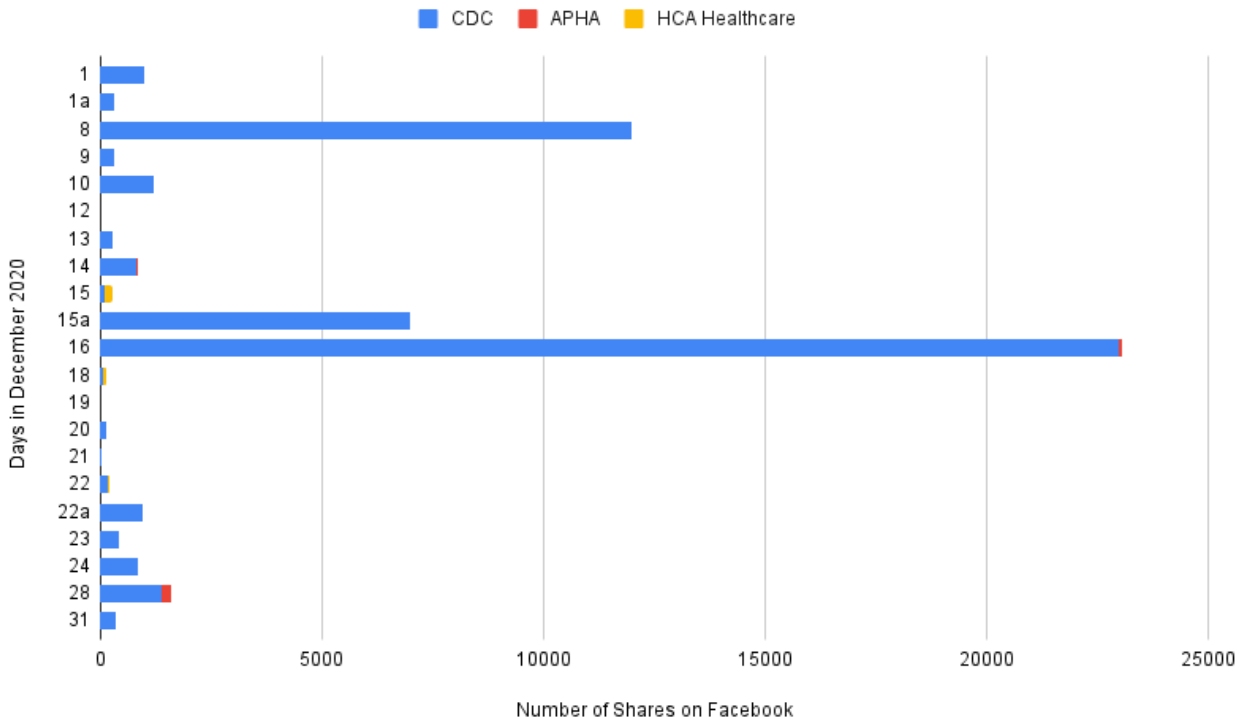
Some of the word choice and sentence construction also overlapped across the posts and releases for the public health organizations. The following themes emerged in comparing the three organizations' approaches to vaccine messaging surrounding the COVID-19 vaccine rollout.

Audience Responsibility

The three organizations demonstrated different levels of community or participation in the public health response. HCA Healthcare employed more third-person pronouns like our and us to signal a shared purpose or experience among communities getting the vaccine. In contrast, the CDC used vocabulary representing self-management (e.g., following the current vaccine protocol) like your and you. APHA attributed an equal level of responsibility to get vaccinated

by using we. In terms of group affiliation, the CDC used the most *Population Identifiers* by highlighting different Priority Populations in the United States. The APHA focused more on a specific Priority Population (minority communities), while HCA Healthcare used little to no *Population Identifiers*.

Audience Action

All three organizations implemented forceful language in their materials to mark a turning point or important behavioral next step. Vocabulary like critical or pivotal attempted to rally people around a new, time-sensitive action. The CDC and APHA used critical more than once in their news releases. Moreover, the APHA and HCA Healthcare evoked war imagery by adding words like overcome, conquer, and deploy. However, the APHA in particular referred to the recovery effort against COVID-19 as a battle or fight across its releases and Facebook posts to initiate audience action.

Audience Expectation

The three organizations also structured their writing to help readers visualize a future desired state of existence. The word choice in the Facebook posts (primarily after the vaccine rollout) included hope, healing, and normalcy. The CDC in particular used more medically grounded language to suggest that the United States would be transitioning to mass or herd immunity. News releases for the CDC and APHA also primarily acknowledged the emergency status of the situation. Each time they encountered a breakthrough in the health response, they often referred to it as a milestone event in their reporting. The elevated language cut through the monotony of previous COVID-19 information like typical protocol.

Summary

This chapter presented an overview of the findings of a comparative case study and textual analysis across three public health organizations: CDC, APHA, and HCA Healthcare. Throughout the study, five coding categories were applied: *Audience Needs*, *Audience Values*, *Audiences Experiences*, *Population Identifiers*, and *Traditional PR*. In a cross-case analysis, three additional audience-centered themes emerged: *Audience Responsibility*, *Audience Action*, and *Audience Expectation*. Those themes were used to interpret the informational gap needed to answer the following research questions:

RQ1: What traditional PR strategies do American health organizations employ to communicate about vaccines to different U.S. publics?

RQ2: How did those PR strategies change when communicating about the COVID-19 vaccine to priority populations during the pandemic crisis?

The resulting findings inform best practices and further recommendations laid out in Chapter 5. In addition, the limitations of the study and future suggestions for research will be discussed.

Chapter 5

Discussion

Introduction

This study sought to address a gap revealed in the scholarly literature concerning how vulnerable populations interact with vaccine communication. The informational gap included three areas of focus: the amount of control of information, the level of resource sharing, and the types of relationships or context used in vaccine communication, especially related to priority populations in the United States. Priority population members represent vulnerable groups generally with low preparedness and more specific health care needs.

Accordingly, the following research questions guided the investigation surrounding the gap:

RQ1: What traditional PR strategies do American health organizations employ to communicate about vaccines to different U.S. publics?

RQ2: How did those PR strategies change when communicating about the COVID-19 vaccine to priority populations during the pandemic crisis?

Findings on Traditional PR Strategies for Priority Populations

To synthesize PR strategies used across the three American public health organizations, the following themes were selected. The themes frame the findings based on the previously identified informational gap: controlling information, sharing resources, and building relationships and setting the context.

Controlling Information

In this research project, the traditional media formats reflected placement and attribution decisions implemented by organizational representatives (Newsom et al., 2013). Editorial control often lies with the presenting organizations (Elrod & Fortenberry, 2020), thus impacting guidelines and directed behaviors shared directly on the official channels. The CDC, for example, signaled changes to guidance by incorporating the action verbs: advise or recommend. The organization also emphasized that the guidelines typically originated from in-house experts. Alternatively, APHA highlighted pathways to outside resources with action verbs like hear and check. HCA Healthcare used the least amount of editorializing beyond directing audiences to longer-form content. When referring audiences to local content on their pages, all three public health organizations used learn or find.

Word choice also streamlined or intercepted direct messages to the public. Germ-weapons expert Jonathan Tucker reviewed a 2002 CDC briefing on strategic plans for a potential smallpox attack. In his analysis, he identified the briefing as bureaucratic and full of jargon (Springston & Lariscy, 2005). Similarly, during the COVID-19 vaccine reporting, the CDC used a lot of medical jargon like side effects, adverse events, and dose. However, Springston and Lariscy (2005) argued that strategic communication involves building necessary confidence in the organization's ability to carry out a large-scale vaccination effort. That kind of practical contact aligns more with *Audience Experiences*. The CDC and APHA primarily appealed to *Audience Values* in their PR materials. HCA Healthcare employed more *Audience Experiences* in its content.

Sharing Resources

Some findings demonstrated that audiences relied on the PR materials to offer and adjust narrative guidance. The uses and gratifications theory suggests that interest in exposing others to information can drive audience motivation for engaging with content (Zhu et al., 2018). For example, the number of shares for each Facebook post helped indicate the audience's positive view of an item or items supplied by the organization. Conversely, a lack of shares signaled that the audience did not find the information suitable for that PR tactic (Elrod & Fortenberry, 2020).

Engagement also fluctuated when posts presented different types of resources. The CDC primarily relied on vaccination instructions paired with generic creatives like arms with band-aids or vials. However, posts that gave facts about side effects or the mRNA technology performed significantly better. CDC posts 8 and 15a were the second and third most shared posts in the sample (see Figure 4.4). In addition, the two posts directed readers to different resource formats: a video and an infographic. HCA Healthcare generally added real photos of its members receiving the vaccine. For the APHA, Facebook posts incorporating continuing education audiovisuals content or graphics garnered more significant engagement. A post that guided readers to an outside infographic on ways to talk about the COVID-19 vaccine received four times more reactions than the post with the second most reactions in the sample.

Some resources even enabled receivers to proactively manage their health environments (Zhao et al., 2019). The APHA in particular used rhetorical language as an advocacy tool. To moderate changes in behavior over the authorization of the vaccine, one APHA release stated: "While this news is very exciting, let's be careful not to put the proverbial 'cart before the horse.' The race to defeat COVID-19 is far from over" (American Public Health Association, 2020).

Building Relationships and Setting Context

The organizations also used their PR materials to acknowledge relationships with different populations. Authentic resource-sharing reflects the two-way symmetrical model by presenting the health care organization as a contributor of industry knowledge and experience rather than using a one-way symmetrical model that chooses research to persuade publics to behave in specific ways (Wise, 2001). In addition to evidence-based information and expertise, the shared knowledge should integrate patient values, preferences, and the sociocultural situation surrounding health care delivery (Vardeman-Winter, 2011). The CDC most consistently appealed to general values by talking about desired effects of the vaccine: safety, immunity, and protection. Alternatively, the CDC and APHA also integrated population-specific identifiers to differentiate demographic groups. Both organizations did not address specific group values and needs. In their respective news releases, the CDC and APHA used the word everyone more than once. However, Vardeman-Winter (2011) pointed out that specific phases of knowledge exist like embodiment or knowledge acquired through tangible experiences with the physical body. For example, acknowledging "elderly" people as an at-risk group does not necessarily equate to addressing the physical or caregiving constraints of the population such as immobility, compromised immune systems and diminished cognitive capacity.

Additionally, context affected engagement with public health PR materials. PR activities and events do not necessarily occur for free. The types of events that make health care items newsworthy like free medical screenings or presentations by medical experts come with associated costs for implementation (Elrod & Fortenberry, 2020). For example, two Facebook posts promoting their partner update calls demonstrated the lowest engagement in the entire December 2020 sample for the CDC. The sponsorship by the CDC changed the meaning of the

resource. The two posts also occurred respectively on December 15 and 21 and used almost identical copy (see Figure 5.1). In contrast, HCA Healthcare converted random moments where their staff members received their first doses into promotional events. One Facebook post labeled a week where many health care professionals started the vaccine process as a historic event (HCACare, 2020). The event posts performed better in the HCA Healthcare sample as well.

Figure 5.1

CDC Facebook Posts for December 15 and 21

(CDC, 2020)

All three organizations also used relationships or context to motivate forms of participation in the public health effort. In particular, organizations incorporated more relational information in their news releases. For example, the CDC cited partnerships with state, local, tribal, and territorial health departments (CDC, 2020) to illustrate social capital in the public health environment (Clarke, 2011). Additionally, the APHA interspersed different community affiliations like "loved ones and their communities" or "minority communities" (APHA, 2020) in their appeals to the public as potential victims of COVID-19.

Recommendations

The findings that emerged from this comparative case study and textual analysis helped inform an original artifact, presented in the form of an infographic (see Appendix A). The infographic illustrates SPREAD, an acronym that represents six PR strategies or recommended best practices for audience-centered vaccine communication.

'S - Simplify Presentation' reinforces audience-centered, presentational best practices. The step encourages public health organizations to research vaccine stories published by industry journalists or outlets to ensure their content matches the style and presentation implemented by relevant media personnel (Elrod & Fortenberry, 2020). Specific knowledge of the health care context remains invaluable (Hetherington et al., 2019). Additionally, it pushes practitioners to move away from jargon. Complex language can impact the reader's experience by overshadowing the information exchange with esoteric medical debates (Zhu et al., 2018).

'P - Provide Resources' motivates PR practitioners in public health organizations to provide tangible deliverables for their audiences, especially utilizing different modalities. Wise (2001) pointed out that public health lacks the glamor and gratification of other health fields. However, the value of the content goes up due to the need for timely dissemination of

safeguarding information like directives during a disease outbreak (Avery & Park, 2019). As such, practitioners need to provide adequate resources to help facilitate productive forms of audience engagement (Elrod & Fortenberry, 2020).

'R - Recommend Actions' reminds the practitioner to use more soft verbs to convey guidelines or directed behaviors. The step promotes first-person messaging (e.g., we, us, etc.), which indicates that audience members serve as collaborators in the public health effort (e.g., understanding the vaccine). Grunig and Grunig (1991) also highlighted the significance of finding active audience members rather than passive receivers that randomly take in information. PR in health care can no longer be limited to historical functions like promoting a positive image or transferring relevant news (Tomic et al., 2010).

'E - Empower Receivers' positions practitioners as mobilizers of information, where they generate awareness of the issue, provide strategies to handle the issue, and speak to developing public concerns (Clarke, 2011). Persuasive techniques reflect a more asymmetrical view of PR that assumes one side wins and the other loses (Grunig & Grunig, 1991). Instead, practitioners should construct the vaccine messaging with traditional PR language grounded in advocacy.

'A - Address Identity' initiates a two-way, co-creational PR perspective by actively investigating specific audience health needs, desires or goals (Guy et al., 2007). The step prompts practitioners to represent various populations (e.g., children, parents, minority members or individuals with special health care needs) beyond acknowledging one-dimensional identifiers. It also initiates a strategic PR process of consulting audiences as decision-makers in the vaccine communication campaign. In other words, practitioners proactively plan interactions with the publics instead of addressing them as an afterthought (Grunig & Grunig, 1991).

'D - Direct Outside' encourages communication to direct beyond in-house materials and show a holistic perspective of the issue. External partners help coordinate resources to reflect consistent vaccine messaging and simultaneously promote trust (Avery & Park, 2019). Hetherington et al. (2019) also suggested that PR practitioners can act as "boundary agents" (p. 577) that forge partnerships between health entities to navigate the rapidly changing health care landscape better.

Strengths and Limitations of the Study

The methodology served as a strength of the research due to its ability to provide a richness of data and look at specific case materials in-depth. For example, the researcher could record the frequency of word choice or discover recurring themes beyond the ones established in the preliminary coding scheme. The investigation also relied on multiple data sources, enabling the researcher to identify answers to causal questions through triangulation.

Conversely, the scope of the study may have limited the comparison of PR strategies for vaccine communication. Some insights could not be retrieved by reviewing materials only accessible in the public domain. For example, the study recorded the number of shares for each Facebook post but did not indicate the amount of sharing for each news release. Without access to each organization's website analytics, the researcher has less knowledge about the impact of the online releases on receiving audiences. Additionally, the research could be further limited by the narrow timeframe of the study.

Suggestions for Future Research

This study focused on two traditional PR tactics used by American health organizations to communicate about the COVID-19 vaccine. However, future research could expand to other tactics like interviews, newspaper and magazine articles or promotional materials. The analysis

also looked at materials from December 2020, the month when the COVID-19 vaccine first became available to the American public. Other PR strategies might have become more visible over an extended data analysis period. In addition, public health organizations could have adjusted their communication plans as they familiarized themselves with the changes in the unprecedented health environment.

Conclusion

This study looked at the role of PR in serving audience-centered health care needs. It identified a gap in scholarship concerning the ability of vaccine communication to address the dynamic requirements of receivers. Accordingly, it sought to assess the PR strategies used by American health organizations to convey new information about the COVID-19 vaccine, particularly to priority populations in the United States. As such, the following two research questions were formulated:

RQ1: What traditional PR strategies do American health organizations employ to communicate about vaccines to different U.S. publics?

RQ2: How did those PR strategies change when communicating about the COVID-19 vaccine to priority populations during the pandemic crisis?

A comparative case study and textual analysis served as the method for the investigation. Three cases were selected: CDC, APHA, and HCA Healthcare. Accordingly, the research pulled from textual materials–Facebook posts and news releases in December 2020– related to those

three cases. The scope of the study reflected the period before and after the official rollout of the vaccine on December 14.

In the initial analysis, the following themes were selected: *audience needs*, *audience values*, *audience experiences*, *population identifiers*, and *traditional public relations*. *Audience responsibility*, *audience action*, and *audience expectation* emerged as additional themes. The themes guided the project findings and ultimately informed a set of six best practices, defined in Appendix A: "PR Strategies for Audience-Centered Vaccine Communication."

Ultimately, this research project attempted to fill the gap in understanding how PR professionals can communicate changing information during a health event like the COVID-19 outbreak. Large-scale health events impact different audiences and require messages grounded in instructions, guidelines or directives. This study investigated the strategies used in traditional media materials by three well-known, American public health organizations to communicate about the new COVID-19 vaccine. It also discussed ways PR practitioners can assume a leadership role by becoming experts in the changing health context, speaking to distinct health needs, and providing better signposts for audiences navigating new instructions.

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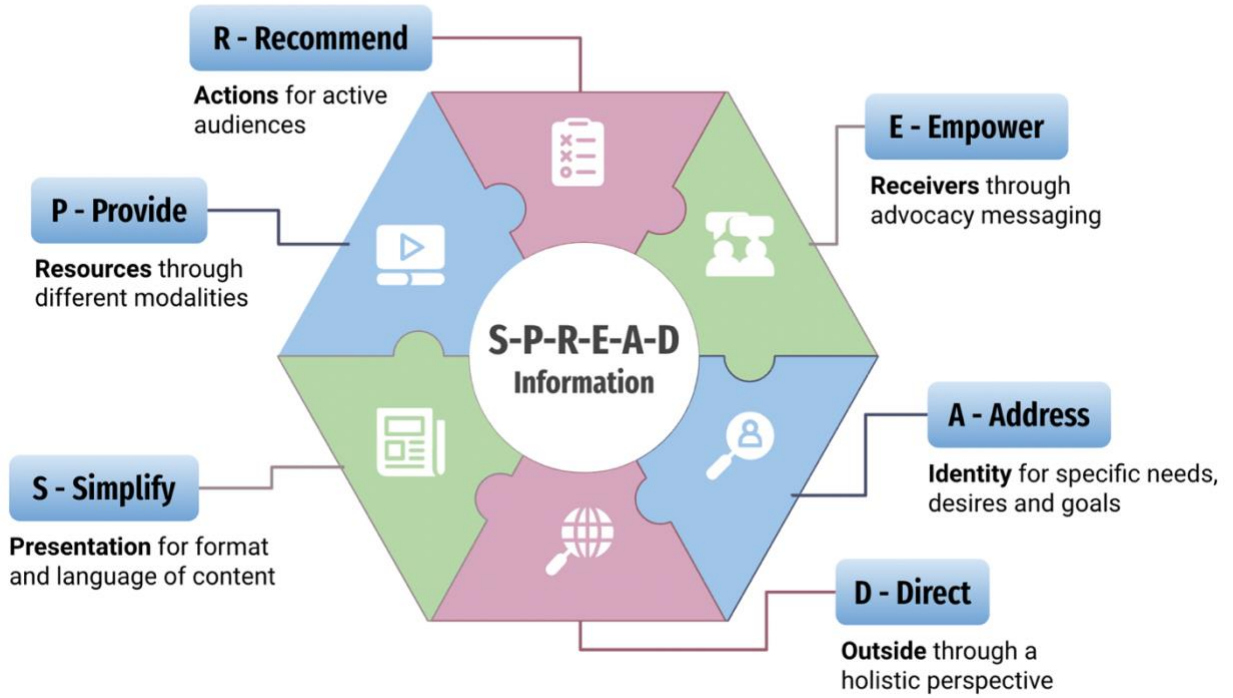
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Appendix A

PR Strategies for Audience-Centered Vaccine Communication

R - Recommend
Actions for active audiences

P - Provide
Resources through different modalities

S - Simplify
Presentation for format and language of content

S-P-R-E-A-D Information

E - Empower
Receivers through advocacy messaging

A - Address
Identity for specific needs, desires and goals

D - Direct
Outside through a holistic perspective

(Mills, 2022)