National Network of Public Health Institutes

Research insights on core audiences

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by:

Kristen Grimm

Erin Uy
Hannah Ross
Ben Christiason

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Overview

National Network of Public Health Institutes (NNPHI) is committed to improving public health in America. As part of your efforts, NNPHI is focused on increasing vaccine access and uptake in underserved communities and among groups with low vaccine confidence. To effectively reach those communities, public health professionals should consider the unique circumstances each community faces, their barriers to vaccine confidence, the information (and disinformation) they're receiving, who they view as trusted messengers and their values.

To help guide the community outreach process and creation of culturally relevant resources and outreach strategies, Spitfire conducted research on the public conversation related to vaccines focused on three key groups NNPHI identified: Rurally located (outside of urban hubs), Native and Black Americans. Spitfire's charge has been to gain insights on the most effective approaches to messaging, assessing if they are culturally relevant, people-centered and ultimately resonate with your priority audiences.

Our research aims to answer the following questions about each of the key groups:

- What are the main barriers news media, public health campaigns and research efforts attribute to vaccination rates and hesitancy in these communities?
    - How does the news address key issues like accessibility, disinformation and equity?
- How are different types of mediums telling the story?
    - National news outlets
    - Local news outlets
    - Public Health organizations
    - Community-specific messengers
    - Social media voices
- What are the current outreach approaches and messages? How might new messaging interrupt existing barriers?
    - Nationally
    - Locally
    - What's working? What's not working?
    - Who's included in the conversation? Who is being left out?

Spitfire has developed this insights guide with recommendations to inform the next steps of NNPHI's broader project to equip and support specific community-based organizations with communications outreach tools to address vaccine hesitancy. Building from this research, we will support these organizations with community-specific campaign messages and an outreach plan that focuses on their nuanced values and barriers, including potential political polarization, distrust of institutions or COVID-19 fatigue.

Methodology

Spitfire conducted landscape research, exploring online conversations, communication and behavioral documentation and earned media coverage about vaccine hesitancy to identify a set of primary barriers, narrative and messages that either contribute to or help resolve vaccine hesitancy. Our analysis focused on NNPHI's identified priority audiences – Native, rurally located and Black communities – with a careful look into nuanced cultural and community aspects.

We looked at both the ways media and other platforms reported on communities with low vaccine confidence and the way health officials are currently messaging those communities. Our research methodology included scanning local, state and municipal papers as well as national and academic sources and identifying common themes as well as gaps in the messaging (e.g., what is being suggested vs. what is being deployed). Sources include research reports; community member messaging suggestions (taken from polls, media interviews and other community-generated content); evidence-based solution communication toolkits for other community-centric messaging campaigns adapted for COVID-19 vaccine hesitancy (as well as messaging campaigns and initiatives aiming to combat disenfranchisement and distrust of public health officials and medical personnel); media coverage; and organization-specific tools and resources.

Following the analysis, Spitfire consulted with public health and community experts specializing in outreach to Native, rurally located and Black communities to validate and build expertise into the research findings and recommendations. The experts represented the following organizations:

- Harvard T.H. Chan School of Public Health
- Council on Black Health
- Native Nexus
- Research Program on Global Health and Human Rights at the University of Connecticut
- Robert Wood Johnson Foundation

Current context

In the United States, 57% of the population is fully vaccinated (Ritchie, et al). On Nov. 10, 2021, a daily snapshot captured that 26 million booster shots were administered that day. A Kaiser Family Foundation study of 43 states in the U.S. revealed the following vaccination (at least one dose) rates by race (Nambi Ndugga):

- 71% of Asian Americans
- 59% of Native Americans
- 55% of white Americans
- 53% of Hispanic/Latino Americans
- 47% of Black Americans
- 58% of rural residents
- 75% of urban residents
- 73% of suburban residents

Note we used Center for Disease Control data to fill in the vaccination percentage of Native Americans and the Kaiser Family Foundation COVID-19 October 2021 Vaccine Monitor for the breakdowns between rural, urban and suburban residents.

The vaccine data broken down by race helps us understand the differences in vaccine rates between white audiences and communities of color. Companies are increasingly requiring vaccines as a condition of employment, and that mandate has proven to increase vaccine rates (Hsu).

There are many important contexts in considering a full picture of sources of vaccine hesitancy in different communities. The American COVID-19 Vaccine Poll surveyed 12,000 Americans to better understand their access to and opinions about the vaccines, as well as messages and messengers that encourage different groups to get vaccinated. The poll is a partnership between the African American Research Collaborative and The Commonwealth Fund (American Covid-19 Vaccine Poll). The poll assessed hesitancy through the question: Among different groups of Americans, what percent are both unvaccinated and hesitant to get vaccinated?

- 41% of Black Americans
- 40% of Native Americans
- 40% of Hispanic/Latino Americans
- 37% of white Americans
- 23% of Asian Americans

Among all respondents, what percent face or faced barriers to accessing the vaccine? (Examples of barriers include being too busy when appointments are available, needing transportation, etc.)

- 57% of Asian Americans
- 56% of Black Americans
- 55% of Hispanic/Latino Americans
- 49% of Native Americans
- 48% of white Americans

The COVID-19 pandemic revealed stark disparities, with Black and Hispanic/Latino Americans disproportionately dying of COVID-19, and in less morbid cases, these same groups were more likely to get sick

with COVID-19, face job losses, and experience medical and financial devastation. Black and Hispanic/Latino workers were overrepresented in essential labor industries, requiring them to take health risks to go to work.

Understanding the anti-Blackness that's foundational to the American government and medical system is critical to understanding sources of vaccine hesitancy among communities of color. For the sake of this research, we looked specifically into how anti-Black racism impacts public health messaging concerns. "Racism is, at least in part, responsible for the fact African Americans, since arriving as slaves, have had the worst health care, the worst health status, and the worst health outcome of any racial or ethnic group in the U.S.," notes a study from the Journal of the National Medical Association.

Additionally, while Hispanic/Latino communities were not a focus of this research or scope, there are several intersections of identity between Hispanic/Latino communities and the priority audiences addressed in the scope (for example, Hispanic/Latino individuals in rural communities or with Black and/or Native heritage). That intersection of identities, not limited to Hispanic/Latino individuals, is important for researchers and public health experts to keep in mind.

Landscape overview

Toplines from our research

In our audience-specific findings section, we detail our complete findings that instructed these toplines, answering the questions highlighted in the prior overview section. Here are our key research takeaways, including stakeholder conversation insights, which inform our recommendations.

Many news stories lump together all vaccine hesitant Americans as a monolith.

Media stories generally point to a lack of public information or education as a source of vaccine hesitancy without providing nuance and context for different populations' sources of skepticism. Much of the coverage fails to capture issues of misinformation, disinformation, accessibility, historical barriers or sources of mistrust in the medical system. Messages that address the multidimensional concerns facing different communities and articulate effort to build trust and buy-in are needed to fill gaps and break through hesitancy barriers.

Just as coverage and analysis lumps all vaccine-hesitant groups together, racial and ethnic populations, specifically Black and Hispanic/Latino communities, are often lumped together in analysis and public health messaging campaigns despite having different viewpoints and sources of hesitancy.

Community leaders play a key role

There's an opportunity to engage local leaders and influencers who deeply understand and are trusted by their communities to serve as ambassadors and encourage vaccine participation. Humans are social by nature and tend to align with others who they perceive have similar beliefs and values. Hence, leading outreach with outsider medical experts who are representative of government and health institutions that communities already do not trust can sow even more doubt. Current community leaders, whether teachers, local health care professionals, Native clan elders, etc., are the best messengers to help shape and deliver vaccine information. We recommend public health institutions collaborate with community leaders to develop appropriate outreach resources, messages and support.

Changing guidance creates uncertainty and reinforces medical mistrust

Major public health agencies are working to provide clear, consistent messages about COVID-19 and how communities can protect themselves from the virus. And as scientists uncover new information about the virus, public health guidance will change with it. However, that changing guidance can create uncertainty and incite distrust for groups who are already wary of health and government institutions from both historical reference and more current experiences. For disinformers who aim to sow fear, confusion and distrust in the vaccine and spread inaccurate information about the pandemic in general, this inconsistency provides an opening to create an environment of suspicion and fear. Further, this skepticism and concern encourages a wait-and-see attitude, prolonging people's inclination to delay making a decision on whether to vaccinate.

Philosopher of science Lee McIntyre calls a "scientific attitude" an openness to seeking new evidence and a willingness to change one's mind. By providing a clear through line and context for the changing guidance (in the right channels where conversations are happening), messaging can sooth and recognize fears while lifting up the current scientific and community recommendations. Messaging should clarify that changing guidance is an expected result of new revelations, discoveries and innovations for improving health and combating COVID-19.

Disinformation and misinformation worsen existing barriers

Disinformation and misinformation narratives are often intertwined with health and safety concerns as well as existing sentiments of distrust of medical establishments or public health officials and local, state or national mandates. The spread of misinformation and disinformation is particularly harmful when it is shared by a person's social circle because they are more likely to believe it and share it. Tracking and fighting the spread of disinformation is a critical step to regaining public confidence in the face of uncertainty. Organizations doing that work include Stronger, which works to combat disinformation through the frame of science and social justice, and First Draft News, which helps equip individuals and organizations to understand, track and address misinformation and disinformation.

Accessibility is a logistical, administrative and structural issue

Across all priority audiences, logistical barriers such as finding child care, time off work, geographic difficulties for finding or getting to an appointment, and access to reliable internet are at the crux of many discussions about overcoming barriers. Additional accessibility barriers include language accessibility and other administrative obstacles such as lack of an easy-to-use vaccine registration system, minimal time options for appointments and other non geographic access challenges.

Current and historical racism and disinvestment generate distrust and disenfranchisement

Our nation has a long, deep history of structural racism in health care for communities of color, specifically Native and Black communities, as well as a general lack of rural community infrastructure investments. Therefore, many in those communities experience multidimensional anxiety and distrust of a medical system that has exploited, harmed or ignored them. While national public health campaigns to increase vaccination rates intend to serve such communities, they often lack the multidimensional messages that effectively resonate with audiences. Additionally, each of those priority audiences has a diversity of identities within; and depending on region, age, gender and many other factors, unique priorities and concerns may be prevalent across the audiences.

Anxieties are nuanced, tapping into socioeconomic status and generational and gender differences

There are generational and gender differences within each audience. There are logistical barriers such as geographic or technological access, language accessibility and limited vaccine distribution capacity in conjunction with attitudinal barriers fueled by distrust and/or anxiety of medical systems or local and federal governments. Rural communities in particular have significant socioeconomic, religious and other differences that inform their experiences, perspectives and moral matrices or values that drive action. Tapping into the unique driver of each priority community's moral values is crucial to making audiences feel heard and empowered to make their own vaccine choices. That includes ensuring that pro-vaccination narratives are not condescending and allow for personal empowerment and education.

Short-term efforts lack long-term impact

While short-term campaign efforts, such as holding a single vaccine clinic outside a concert, may get a few individuals to receive a dose, they lack the sustainability to create deeper, long-term impacts. All the priority audiences indicated that short-term investments are often not seen as authentic engagement or investment in improving a community. They expressed the desire for activities of empowerment that would allow for the work to be truly community-led, leading to a deeper and more sustainable shift.

Recommendations

Building on our key takeaways and audience findings, these recommendations guide us toward a communication framework and approach to developing audience-focused, nuanced messages that speak to the values and barriers of NNPHI's priority audiences.

Avoid repeating the barrier

This research helps us further understand the barriers and sources of hesitancy facing Black, Native and rural groups. While messages should be conscious of barriers and soothe audience concerns, it shouldn't repeat barriers. For example, consider the messaging strategies for pregnant women concerned about risks and side effects associated with receiving the vaccine.

Barrier: Concerns about pregnancy risks/complications

- **Weak message that repeats the barrier**: *I know you think that getting vaccinated will cause pregnancy complications and put you at risk, but it won't.*
- **Strong message that addresses the barrier**: *If you're pregnant, you can still safely get vaccinated against COVID-19, in fact, the CDC recommends it. Pregnancy puts you at higher risk for severe illness if you get COVID-19, and getting vaccinated is the best way to protect both you and your baby against the virus.*

Some messages must overcome barriers in the form of policies, environmental conditions and programs that cannot be immediately changed. For example, many people who work must invest time and money into getting vaccine shots. If they take time off work to get the shot or have a down day to recover from side effects, they may lose wages because they do not have paid leave benefits. Because these structural barriers are unlikely to be removed in the immediate term, messages should focus on the programmatic efforts that help people overcome the barriers (e.g. financial incentives, free rides to vaccine sites) and the value of getting vaccinated compared to the cost of being impacted by COVID-19.

Recognize the varying and multidimensional barriers each community faces

For messaging outreach to be strategic, we recommend asking audiences where and how they receive trusted information and education, including videos, flyers, social media messages and more, incorporating both facts and stories, with the goal of increasing vaccine confidence, health literacy about the side effects and vaccine creation process and digital literacy as it relates to accessing appointments and health records. For example, rural communities are less likely to engage with national ad campaigns circulated in urban department stores, medical centers or pharmacies. Instead, more localized community education outreach, such as at a regional medical center or a community center, may be better received. Community input should be invited and incorporated to ensure outreach materials and messaging really get at the heart of values and barriers to vaccination.

For Black communities, focus on vaccine safety and rebuilding trust

Concerns about vaccine safety and side effects of the vaccine have been cited as the main reasons for hesitancy among Black communities. Messages addressing safety will need to overcome a range of compounding barriers, including mistrust of government and health institutions, perceptions that vaccine development and distribution was rushed and general institutional racism. Messages should take an approachable tone that is not condescending and rather encourages inquiry without repeating the barriers. As stated above, a majority of Black individuals have been vaccinated (51%). Messenger engagement should be an investment in sustainable leadership, not just having messengers "do the hard work" of code-switching white-centric public health messaging, but instead support them and offer real and authentic empowerment activities.

Aligned to national efforts to convince Gen-Z communities that vaccination is important even though the age group does not typically experience severe COVID symptoms, Black young adults should also be prioritized within this audience. Messages and particularly this type of outreach ought to consider their broad safety implications and ensure vaccination sites are in accessible, community-oriented places where they feel safe.

For Native communities, focus on community responsibility

Native communities are moved by seeing the human impact of how many loved ones COVID-19 has taken away. The most effective messages for Native communities should focus on the "protection of culture, family and elders in the community." "We" ahead of "me" campaign language is particularly influential and best delivered by elders. Finally, messages ought to acknowledge and support communities' right to choose the vaccine, allowing for inquiry and self-determination.

Caregivers play a critical role for Native elders and they can help with the issue of access - for both messaging and tactics. Partnering with caregivers and other trusted service providers, like Meals On Wheels can help take down the barriers of trust and access for Native communities. Native elders who hold trusted positions in their communities, like athletic coaches, cultural organization leaders and teachers are also strong messengers for reaching Native youth.

For rural communities, focus on access and messengers

Limited access to vaccines and a flurry of disinformation and misinformation are both significant contributors to vaccine hesitancy in rural communities. The two scenarios combined have encouraged skepticism about the validity of vaccine outreach and resources. The healthcare workforce shortages have hit rural areas particularly hard, making it difficult to sustain vaccination programs. It is imperative that public health providers, through strategic communications, express where and how vaccines are readily available, reducing any impressions of inaccessibility or notions that vaccine access is limited to select people or communities.

For rural communities, a "back to normal" fails to demonstrate sensitivity to their circumstances. For essential workers who had to confront unsafe working conditions and job insecurity throughout the pandemic (a group

that cuts across all our audiences), "back to normal" doesn't resonate as the old normal wasn't working for them. Effective messaging to rural communities should be tailored to each specific community, understanding region, race and other social affinities.

When considering messages for rural communities, it is important to recognize that rural hospitals and health centers are also often community hubs, where local business leaders, agriculture leaders, and faith leaders come together. They can work together to develop messages that are appropriate for different segments of the rural communities they represent, working to ease polarization. They are the best informants and messengers to quell damaging disinformation and misinformation. This approach aligns to Stacey Abrams's 'Count Me In' campaign, which focused on the rural south, organized around two principles: listening to communities and then prioritizing responding accordingly (Dr. Aditi Nerurkar).

Public health leaders should build trust and engage communities through trusted community influencers and events

Community partnerships are crucial for creating a through line of information that provides steady and trusted guidance to instill comfort when changing institutional guidance evolves. Providing this clarity and having it come from trusted community messengers counters instances of misinformation and disinformation that sow confusion. Note that for many communities, hearing directly from trusted leaders resonates better than from public health institutions with no community affiliation. We heard from stakeholders that an educational pamphlet from the CDC, for example, would not resonate with audiences.

Stakeholders working with Native, Black and rural communities repeatedly emphasized the importance of engaging trusted messengers and strategically located outreach, noting that both the venue and the influencer together are important. The Council on Black Health in particular offers community health worker training to equip community members with the tools they need to deliver resources to their peers as a trusted messenger.

Rather than focusing on short-term investments from outside groups to improve vaccine uptake in a community, stakeholders highlighted the value of creating community-empowerment activities to allow for community members to control the narrative rather than simply contributing to it. This long-term investment in community infrastructure is likely to have deeper and more sustainable impacts on communities outside of vaccine development. According to stakeholders, building empowerment in a community is a way to show authentic investment and build trust for those that may have multi-dimensional anxieties about interacting with national organizations or public health officials.

Here are some examples of messengers and creative outreach tactics that work.

Steps to gain insight

- **Partnerships between community leaders and healthcare providers.** Authentic partnerships and message collaboration work to build trust between the medical system and underserved communities. These partnerships should include listening sessions that invite community feedback about the vaccine infrastructure and outreach approaches, such as the California Coronavirus Testing Task Force

completed when writing their report, 'Human Centered Recommendations for Increasing Vaccine Uptake'.

- **Engaging via community-led opportunities.** Community-led outreach casts a wide net without being overly resource intensive. Getting community-specific feedback about what kind of outreach is needed will help public health leaders understand what to invest in (e.g., walk-in clinics, mobile clinics, town halls).

Early insight on strong messengers (from stakeholder conversations)

- Faith leaders, particularly in rural communities, are often seen as important community conveners, providing not only spiritual guidance but information about local initiatives or public health recommendations.
- School leaders (teachers and administrators), specifically on college campuses, could be beneficial in providing a safe space for dialogue and education about vaccinations and other public health efforts.
- College campus leaders, especially trusted community leaders, could be crucial messengers and educators for priority audience members in college spaces, providing a safe place to convene and discuss the importance of getting vaccinated.
- Athletic coaches, especially in rural communities, are often seen as trusted community leaders and could provide information to both families and athletes.
- Elders, specific to Native communities, are seen as the most trusted members of the community, making their input crucial for reaching people of all ages.
- People with COVID-specific vulnerabilities who benefit from others getting vaccinated, or their caregivers, are an underutilized audience and messenger (for example: the elderly, parents of young children, immunocompromised individuals).

Early insight on creative tactics (from stakeholder interviews)

- Community events can be sites of high impact engagement, for example:
    - Outreach at social events like concerts, and offering vaccines onsite with perks for getting vaccinated
    - Outreach at houses of worship during services and other events with faith leaders communicating the information and sharing why vaccination is important. For example, the Henry Ford Health System partnered with houses of worship to centralize messaging for local communities.
    - Partnering with a trusted organization like meals on wheels to deliver vaccines to homebound residents who are already connecting with and have established trust with communities
    - A drive through vaccine clinic at a large-scale venue like a sports stadium with extended hours

Take a frame of empowerment

We recommend messaging take a positive and empowering but realistic frame, carefully avoiding tones of fear or condescension. Since vaccine hesitancy comes from multilayered sources of misinformation, disinformation, lack of access to accurate information, fear, access issues, historical medical mistreatment and other factors, messaging should invite questions, allow for honest communication of concerns and community input and create an environment of open inquiry and choice, including offering a clear window into the vaccine creation process. We recommend messaging works to establish trust, acknowledge the importance of this decision and encourage engagement and discussion to figure out what is right for each individual.

An empowerment frame also offers the opportunity to lead with a vision that's realistic, overcomes fatigue and doesn't create a false promise of going "back to normal." As variants and other new challenges seeming to prolong the public health crisis emerge, many are reporting experiencing pandemic fatigue. Pro-vaccine messaging should demonstrate how widespread vaccination creates safer communities and make COVID more manageable, without overpromising a total end to COVID-19 or that vaccines will completely eliminate your risk of catching COVID.

It's important to note that while we generally recommend a positive and empowering frame, we also heard from stakeholders working in Native communities, that demonstrating the human loss and uplifting the faces of lost loved ones also helps demonstrate the urgency of this issue and the generational importance of stopping the sometimes-deadly effects of COVID.

Audience-specific findings

Rural audiences

What are the main barriers being discussed for rural communities?

Accessibility

- Messages/solutions being discussed:
    - Geographic barriers
        - Child care and work flexibility are dominant concerns, making it difficult for people to get to or schedule appointments.
        - Many rural communities are considered highly vulnerable (according to the CDC's Social Vulnerability Index), which indicates factors such as housing, transportation and socioeconomic status present challenges (Dobis). In that instance, highly vulnerable is defined as age (adults 65 and older representing higher vulnerabilities) and the presence of underlying health conditions.
        - Georgia Health Policy Center recorded four central challenges within rural communities: limited vaccine supply, patient access (transportation, distance, wait times), limited vaccine distribution capacity, and overall vaccine hesitancy and mistrust (The GHPC Covid Collection).
    - Reliable access to educational materials
        - Major public health institutions, such as the Georgia Health Policy Center signaled that another equity challenge is lack of internet access and technology to not only book COVID-19 vaccination appointments but also to provide education outreach and allow for reliable information to combat mis/disinformation (The GHPC COVID Collection). Not everyone has access to reliable resources or the internet to look up disinformation/myths about the vaccine.
    - According to the CDC's report, "Why Rural Communities May Be At Higher Risk During the COVID-19 Pandemic," rural communities often have a higher proportion of residents who lack health insurance, live with comorbidities or disabilities, are aged 65 or older, and have limited access to health care facilities with intensive care capabilities, which places those residents at increased risk for COVID-19-associated morbidity and mortality (Why Rural Communities).
        - Specifically, up to one-third of adults living in rural areas have a disability, 9% higher than those living in urban areas.
        - Additionally, rural communities are generally older than urban populations and have higher rates of underlying chronic disease (even after adjusting for age) (Baernholdt; Potentially excess deaths).

National coverage/efforts:

- According to a recent study by the Rural Policy Research Institute, the death rate in rural communities is double the level of urban communities (Ullrich).

- National efforts to combat rural vaccine hesitancy include rollout plans from the Georgia Health Policy Center (The GHPCC Covid Collection). Strategies include identifying trusted spokespeople, including local health directors, faith-based leaders and community health representatives; partnering with community organizations to expand vaccine education and rollout capacity and trust; and creating a comprehensive communication strategy that utilizes a multimodal system (Facebook, radio, weekly town meetings, etc).

Community efforts:

- While some community health care centers are working to combat mis/disinformation and vaccine hesitancy, hesitancy among rural health care workers is further hampering trust between community members and those disseminating the vaccine (Johnson).
    - For example, in Georgia, participants in a virtual conversation with rural and Tribal communities expressed an interest in using community health workers for outreach. Specifically, peer support specialists and emergency medical personnel were seen as having strong relationships with community members unlikely to trust medical expertise from outside medical personnel (The GHPC Covid Collection).
- Many local/community-centric voices have encouraged leaders to ensure equitable allocation of vaccine supplies and personnel, with the National Rural Health Association spelling out the particular challenges health care personnel face in rural areas:
    - “Rural health care and public health systems, many of which are already vulnerable, have struggled to respond to the demands of COVID-19. This situation is exacerbated by chronic workforce shortages. Many rural providers have difficulty replacing staff lost to quarantine and are forced to rely on high-cost travel/locum tenens staff to provide services. Vaccine allocation formulas must account for these factors. State plans to prioritize the vaccination of at-risk populations and essential workers must also take these issues into account and include ‘hidden’ essential health care workers that may otherwise be overlooked including volunteer emergency medical services personnel, community health workers, and personal caretakers.” --NRHAP Policy Brief (Gale)
- Other community concerns include the need for a vaccine infrastructure that provides local and state support for the increased costs of vaccine transportation, storage and delivery. Because pharmacies are often scarce in rural settings, other methods of vaccine delivery must be taken into account (Hawryluk).

Disinformation

- Messages/solutions being discussed:
    - There’s a lack of trust between urban public health officials and rural communities, specifically in regard to changing messaging (e.g., the most recent guidance from the Food and Drug Administration allowing children under 12 to receive the vaccine) (Hoffman)
    - Research finds that some of the dominant social media narratives about COVID-19 promote misinformation and disinformation
    - Despite claims from Facebook to combat COVID-19 vaccine information, anti-vaccination groups are continually popping up on Facebook. A recent Media Matters’ review identified 284 public/private anti-vaccine groups (Gogarty).
    - Disinformation is rampant on Facebook particularly, with both anecdotal vaccine stories and other misinformation, harmful vaccine alternatives and rampant disinformation being shared.

    For example, some of the most active groups on the platform are users gathered around resisting COVID-safe measures like quarantining. (O'Sullivan)
  - While evidence doesn't point to social media disinformation disproportionately harming rural communities, a lack of easily accessible and trusted public health messengers can worsen this problem for those living in more isolated settings.
  - Due to the lack of concentrated messaging for rural communities, we could not find targeted disinformation specific to rural communities. According to our stakeholder interviews, the disinformation circling rural audiences includes myths about the safety and efficacy of the vaccines.
- Community efforts:
  - Rural Health Information Hub has myriad education resources to combat mis/disinformation (COVID-19 vaccination in rural areas). The CDC has a Rapid Community Assessment Guide that we can adapt to better understand our community of focus, particularly surrounding misinformation (How to conduct; How to address COVID-19).
- National coverage/efforts:
  - From geographical barriers and accessibility issues to community leaders outside of urban areas emphasizing distrust in urban medical health centers, the disparities between rural and urban vaccine rates (and COVID-19 cases and deaths) persists (Thomson).
  - Undocumented individuals demonstrate a sentiment that's more complicated than hesitancy:
    - Vaccine sites are seen as "deportation sites" for undocumented individuals (Choi)

Equity

- Like all priority audiences, rural communities are not a monolith and are becoming increasingly racially and ethnically diverse, providing additional challenges for Native, Hispanic/Latino and Black, and other communities of color in rural communities (James, et al).
- Language is also cited as a barrier. The CDC has compiled a communications toolkit to help health professionals and community organizations reach populations in their native languages.
  - The toolkit includes messaging from a trusted source, plain language available for sharing/downloading and translated materials to capture a wider audience.
    - An example includes a graphic in Spanish telling the story of a daycare worker's decision to get vaccinated. While the toolkit offers standard messaging in 33 different languages, much of the additional messaging materials are only in Spanish, limiting language proficiency to just Spanish speakers (Communication Resources).
  - The CDC Resources also include messaging in 33 languages other than English.

What/how are platforms discussing the issue?

- For a broad, national audience: National coverage primarily focuses on the overall disparities between urban and rural populations (COVID-19 deaths, number of vaccinated individuals, cases and health care system stress).
- Local outlets: Local and national outlets cover the discrepancies of rural vs. urban deaths. Solutions such as rural mobile health clinics in Kentucky and West Virginia are also a part of the local outlet discussion (Carey).

How is messaging currently being conducted?

Locally and at the community-specific level

- Many toolkits have been created from community, local and national organizations, including the Rural Policy Research Institute and Stacy Abram's Count Me In campaign
- State strategies include increasing broadband internet availability, solutions to the lack of public transportation to vaccination sites, and additional community outreach outside of public health information disseminated on the internet to combat the lack of technology and internet access (State strategies). For example, California, Florida and Iowa held vaccine events at county fairs where community members could receive accurate information and discuss their concerns (as well as receive a vaccine)(Associated Press).
- Additionally, state governors recommended the automation of state immunization systems to improve vaccine reporting efficiency (State strategies).
- To support the lack of vaccine dissemination personnel, long-term strategies include encouraging rural areas to recruit nonclinical providers, such as medical reserve volunteers (State strategies).
    - At least nine states, including California, Minnesota, Iowa, Indiana, Maine, New York and Virginia, have enacted legislation authorizing pharmacists to administer the vaccine, and several more are pursuing allowing dentists to provide vaccinations (Pharmacists Overview).
- To combat the lack of transportation access, providing community rideshare options or additional public transportation was suggested (Transportation Access). Other solutions included providing mobile health units to overcome geographic difficulties and privacy concerns (Prusaczyk).

Nationally

- Much of the rhetoric surrounding "anti-vaxxers" as being the majority of those not vaccinated is centered around sowing distrust about unvaccinated people in general, rather than anti-vaxxers sowing distrust about the vaccine in general, making the narratives hyper partisan and politicized (Yong).

What is working?

While information about actual vaccination rates due to recent organizational efforts are still unclear, these nonprofits, think tanks, research centers and community organizations, and campaigns are working to provide tailored messaging that centers community input and addresses specific audience priorities.

- Rural Hesitancy: National Rural Health Association (NRHA)
    - Launched a campaign initiative called The Rural Vaccine Confidence Initiative to improve rural vaccination rates, highlighting digestible "real facts" brochures, email and other message copy targeting unvaccinated individuals and tools for community partners and businesses including door hangers and posters (NRHA).
    - When considering the actual messaging to use, it is important to recognize that rural hospitals and health centers are also often community hubs, where local business leaders, agriculture leaders and faith leaders come together. They can work together to develop messaging that is appropriate for different segments of the rural community they represent (Health Leaders).
- Efforts such as Stacey Abrams's Count Me In campaign focused on the rural south, organized around two principles: listening to communities and then prioritizing responding accordingly (Dr. Aditi Nerurkar).

- CDC evidence-based strategies for community engagement
    - Vaccine ambassadors, medical provider vaccine standardization, financial incentives, school-located vaccination programs and home-delivered vaccinations, and rural leaders (economic benefits, patriotism) (12 COVID-19 vaccination strategies; COVID-19 vaccination in rural areas)
- Toolkits from the National Rural Health Resource Center have a customizable communications toolkit, aiming to empower rural communities to create a tailored vaccine outreach and education (COVID-19 vaccine confidence).

What needs to be improved?

- While the CDC has a list of strategies for local communities to reach people with limited access to vaccines, many are not being implemented in plans, often due to lack of personnel bandwidth or other resources (Strategies for reaching people).
- Most narratives are often filled with condescension and judgment of people who are not vaccinated without acknowledgement of people's barriers.
    - Public health officials, politicians and celebrities (e.g., President Joe Biden's recent condemnation of those who haven't received the vaccine) repeat that (Jewett).
        - Biden, after citing the most recent CDC and other public health information, said this fall that "despite America having an unprecedented and successful vaccination program, despite the fact that for almost five months vaccines have been available at 80,000 locations, we still have Americans refusing to get the shot … **this is completely unacceptable … they are causing damage and putting our economy at risk**" (Towey). This monolithic lumping of unvaccinated individuals denies multidimensional anxieties or barriers individuals may have, as well as the logistical and access barriers people face.
    - Other education campaigns, such as the We Can Do This COVID-19 Public Education campaign, do not recognize the nuances of rural communities, providing messaging that sees them as a monolith (Ways to ensure).

Solutions include focusing on two avenues: confidence and access. Considerations include what information/materials will be most effective for engaging with separate communities in differing geographic locations, what methods and platforms will reach priority audiences, venues and locations for discussion surrounding vaccines, and vaccine site logistics (Increasing COVID-19 vaccine).

What/who is being left out of the conversation?

- Most rural outreach is focused on geographic and technological barriers and mis/disinformation. Other concerns, particularly impacting rural communities of color, receive little nuanced messaging. Additionally, while public health experts tout community-centric work, little messaging include strong narratives aiming to draw in those with concerns outside of accessibility concerns.

Native communities

What are the main barriers being discussed for native communities?

Accessibility

- Messages/solutions being discussed:
    - Despite being at the forefront of vaccine distribution, Native communities still contend with geographic barriers and reliable access to educational materials. That barrier overlaps significantly with the rural barriers stated above. Additional barriers include the lack of investment in Native communities differing from the personnel and geographic barriers that other rural communities face (Rodriguez, et al).
    - A survey done by the African American Research Collaborative and The Commonwealth Fund (and supported by the Robert Wood Johnson Foundation to expand to Native communities) showed that hesitation was highest among Native American populations, as well as [logistical] barriers (specifically regarding access) (American Covid-19 Vaccine Poll).

Disinformation

- Messages/solutions being discussed:
    - Research finds that some of the dominant social media narratives about COVID-19 promote misinformation and disinformation
    - Despite Facebook's claims to combat COVID-19 vaccine information, anti-vaccination groups are continually popping up on Facebook (Under the surface). A recent Media Matters' review identified 284 public/private anti-vaccine groups. Worries about side effects/long-term effects remain a major cause of concern (Gogarty).
        - For example, Enoch Adams Jr., a member of the traditional Iñupiat Eskimo village of Kivalina, shared that he refused the vaccine due to worries about side effects:

          > "It seems all 3 vaccines have the same characteristics as the flu vaccines available. The side effects are too risky. We've taken some in the past, but we ended up getting a really bad case of the flu from the shots. So we don't take those either. My Mom did take the flu vaccine once. She barely survived the side effects. Never again." (Stacke, et all)
    - Disinformation is rampant on Facebook, particularly with both anecdotal vaccine stories and other misinformation, harmful vaccine alternatives and rampant disinformation being shared.
    - Perpetuated by historical fears of medical exploitation and experimentation, many Hispanic/Latino, Native and Black individuals may be susceptible to believing misinformation about being used as "guinea pigs" in an experiment (Frenkel). Simply sharing out the process for creating a vaccine does not alleviate those worries.
- Community efforts:
    - Language barriers create a further complexity when combating misinformation. For example, in California, many agricultural workers speak 23 Indigenous languages, some not formally written, and therefore the most common forms of vaccine education/outreach (written materials) are not effective (Mines, et al). Community organizers state that outreach is most impactful when done in person or through video/audio formats (Getahun).
- National coverage/efforts:

    - The CDC has a Rapid Community Assessment Guide that we can adapt to better understand our community of focus, particularly surrounding misinformation (How to conduct; How to address COVID-19).
        - The U.S. Surgeon General has a comprehensive document for how different groups can combat misinformation. While extensive and covering many different messengers, it lacks the nuance needed to address certain barriers among communities of color, including those of Native and Indigenous communities (Confronting health misinformation).

Equity

- Disenfranchisement with the medical system due to historical violence and exploitation from the health care system; examples include:
    - Poorly conducted medical studies that included examples of forced sterilization on Native women in the 1970s, the exposure of Alaska Natives to radiation without consent as part of Thyroid research (Pember; Theobald; Leary). Native communities were forcibly vaccinated against smallpox nearly 180 years ago with the explicit goal of then removing them from their Native land (Hedgpeth). Native medical experts emphasize that the reluctance to get the vaccine stems from decades of mistrust due to violence and a lack of ethical or quality health care.
- Native communities have experienced direct exploitation and violence from not only health institutions but by federal, state and local governments.
    - In a 2017 poll done by the Harvard T.H. Chan School of Public Health (Discrimination in America: Experiences and Views of Native Americans), 23% of Native Americans said they had been personally discriminated against due to their Native status when interacting with a doctor or health clinic (Poll finds more). Additionally, 15% of respondents said they had avoided seeking medical care for themselves or a family member out of concern of discrimination or poor quality care.
- This community has been heavily impacted by COVID-19
    - One in every 475 Native Americans has died since the pandemic began. Native mortality rates due to COVID-19 rate far above other groups in America (Lakhani).

How is messaging currently being conducted?

Locally and at the community-specific level

- The National Congress of American Indians vaccination toolkit illustrates how American Indian and Alaska Natives youth can engage in community vaccine efforts, including providing social media graphics and sample posts and age-specific facts for both youth and their parents (National Congress of American Indians).
- IllumiNative, a women-led Native nonprofit, created a campaign encouraging Native peoples to receive the vaccination and dispelling mis/disinformation. Their campaign is called For the Love of Our People.
    - Phases include developing factual and trustworthy information and aiming to disseminate messaging and resources. Materials include a social media toolkit, a vaccine conversation guide and a vaccination messaging guide developed in partnership with the Urban Indian Health Institute (For the love of our people). Additionally, there are trusted source videos

including expert interviews, town hall events, Native comedian skits and other partnership videos.

   - "*For The Love of Our People* hopes to create unique, non-traditional forms of vaccine promotion that empower, deeply resonate with, and build trust among Native youth and other vaccine-hesitant groups within Native communities, such as offering events and incentives" (McNab).
   - Trusted/celebrity voices: Native health care providers/public health officials and celebrities including Dash Turner, Lil Mike and FunnyBone, and Siena East

The vaccine messaging guide provides messaging based on focus groups insights from early 2021.

- Urban Indian Health Institute's messaging strategies include:
   - Centering messaging around cultural values of American Indian and Alaska Native communities, supporting tribal health clinics leading vaccination efforts, utilizing effective ambassadors and acknowledging historic and current harms perpetuated by health care systems and the U.S. government by centering priorities from Native-led organizations
   - Grounding vaccine campaigns in community participation
   - Recognize that vaccine acceptance is a spectrum (Strengthening vaccine efforts in Indian Country)

What is working?

- Despite the disparate impact COVID-19 has had on Native populations, many Native communities completed very successful vaccination campaigns early during the vaccine rollout, for example the Navajo Nation (Nicoa; Treisman). The success was partially due to the use of drive-through clinics and aggressive education campaigns.
   - For example, Navajo Nation President Jonathan Nez led the charge on mass vaccination events on the weekends.
- The American COVID-19 Vaccine Survey showed that the most effective messages for Native communities were focused on the "protection of culture, family and elders in the community" (American COVID-19 Vaccine Poll; Sanchez).
   - "We" ahead of "me" messaging also worked for the Cherokee Nation (Radnofsky).
- Priority messengers also indicated in the survey that Native doctors and nurses, as well as Tribal leaders and governments, were seen as trustworthy sources for vaccine information.
- Effective messages acknowlede and support for Native peoples' right to *choose* the vaccine; medical experts within the Native community stress that allowing questions and supporting the right to self-determination is a "critical step in addressing COVID-10 vaccine mistrust" (Greenwood). To do that, vaccine materials likely resonate with communities when they are co-created, rather than imposed. A survey that the Urban Indian Health institute (UIHI) conducted backs up that, with respondents stating that their primary motivation for getting vaccinated was a "strong sense of responsibility to protect the Native community and cultural ways" (Strengthening vaccine efforts in Indian Country).
- Efforts to rebuild trust of vaccines include Native radio shows and community health clinics (Lazaro).

What needs to be improved?

- Since the initial surge of vaccination in some Native communities, vaccinations have stagnated and pockets of people have resisted getting the vaccine, according to Dr. Mary Owen (director of the Center for American Indian and Minority Health at the University of Minnesota medical school and

president of the Association of American Indian Physicians) (Lukpat). Those pockets appear to be greater in the "17- to 45-year-old range, most likely due to this age group having a greater sense of invincibility and relying on social media for vaccine education."
- Vaccination anxiety due to the language surrounding "trials" and other "experiments" has caused some community members, including leaders, to remain wary about receiving vaccines (Griffith).
- Calls for vaccine mandates are ineffective, increasing suspicions about the "state and system's" goals for getting Indigneous communities vaccinated. That flared when Navajo and Lummi government leaders announced that tribes would be participating in vaccine trials (Pember).
- Efforts to track vaccinations are complicated, because many Native community members move freely between health care facilities, with Utah Navajo's Chief Executive Officer Michael Jensen saying, "patients on the Navajo Reservation tend to be kind of transient, meaning they go to different places for care" (Bennet-Begaye).
- CDC messaging created specifically for tribal communities lacks many of the nuanced barriers faced by Native communities (What tribal communities need to know).

What/who is being left out of the conversation?

- We recommend vaccine messaging address the historical exploitation/violence that Native individuals faced, particularly regarding race-based experiments (Barned). Additionally, messaging should be positioned to combat disinformation about the vaccine rollout and creation.
- Messages centered on establishing trust within Native communities (Mapp) will address historical mistrust and rampant misinformation that is not reaching members of the community.

Black communities

What are the main barriers being discussed for Black communities?

Accessibility

- While issues of systemic racism were discussed for Black Americans, many of the barriers did not include accessibility issues beyond a general disenfranchisement with health care due to historical and modern racism perpetuated by health care providers, health institutions and insurance companies. However, that acknowledgment does not provide solutions for addressing other structural barriers to vaccination access that overall disenfranchisement may cause.
- To combat structural barriers, a study done by CARE and the Yale National Clinician Scholars Program highlighting vaccine acceptance/access issues among Black and Hispanic/Latino communities stated that distribution patterns must be analyzed to ensure that distribution is done equitably (e.g., having doses given out at times outside of the 9-5 workday, same-day clinics, walk-in vaccination sites, etc).
- Gary Bennett, a professor of psychology, neuroscience, global health and medicine at Duke University, highlights that access remains an under scrutinized topic in combating vaccine hesitancy/vaccination in Black communities (especially when access does not necessarily mean equity). Other barriers include appointment timing, registration challenges and other non geographic access challenges. Geographic closeness to a vaccination site does not always mean easy access. A Kaiser Family Foundation survey showed that only 5% of white respondents stated it would be difficult to access a vaccination site, whereas 20% of Black respondents cited that as an obstacle.

- Other barriers include time, transportation, cost or outlet location.
- Commonwealth Care Alliance, an organization in Massachusetts, launched a program that reaches out to its unvaccinated members and helps them schedule appointments and find free rides.

Disinformation

- There is so much rampant dis/misinformation (intertwined with distrust of medical establishments). To build support for vaccines, messages designed to establish trust and build empowerment among communities of color and vaccine administrators may break through barriers.
- Building trust and community power among Black and Hispanic communities
    - Concerns about vaccine safety and side effects have been cited as the main reasons for hesitancy (particularly among Black communities). Those, coupled by the belief that the vaccine was rushed or pushed out, were exacerbated by a long history of medical racism and lack of trust in the medical system and the government in general.
- COVID-19 vaccine misinformation and narratives surrounding Black and communities on social media
    - Mistrust of vaccines and the motivations from health institutions and the government are highly prevalent in vaccine-related posts surrounding Black communities.
    - Misleading posts are often multidimensional (anti-vaccine rhetoric feeds into existing anxieties stemming from systemic racism). Many Black anti-vaccine influencers are still able to spread misinformation with impunity on social media, and white wellness community anti-vax rhetoric has seeped into Black spaces on social media. For example, the claim that the vaccines could have negative effects on women's reproductive health started in white anti-vaccine spaces and was amplified by Black anti-vaccine influencers to Black online communities.
    - Recommendations include putting greater emphasis on all vaccine narratives (positive and negative) rather than focusing on separate instances. All misinformation is not simply about a lack of education and materials but instead a multilayered approach.
- Despite claims from Facebook to combat COVID-19 vaccine information, anti-vaccination groups are continually popping up on Facebook. A recent Media Matters' review identified 284 public/private anti-vaccine groups. Others say that is just one part of the vaccine trust platform, with misinformation online simply showcasing worries that would occur with or without the tech platforms and can be remedied by increased education/outreach about the vaccine.
- A Robert Wood Johnson Medical School research report, titled "Black and Latinx Community Perspectives on COVID-19 Mitigation Behaviors, Testing, and Vaccines," reported that the remaining unknowns about vaccines must be answered to continue establishing trust between health care officials and the public. Rather than focusing on marketing campaigns, health professionals and trusted community leaders who partner may be effective in combatting vaccine skepticism.
- National coverage/efforts:
    - The CDC has a Rapid Community Assessment Guide that we can adapt to better understand our community of focus, particularly surrounding misinformation.

Equity

- Structural inequities (historical medical racism, exploitation and experimentation)
- Ongoing discrimination by health care providers
    - Clinical encounters (outside of COVID-19/vaccine outreach)
        - Childbirth, care of patients with HIV/cancer and substance use disorder (October 2020 poll by Kaiser Family Foundation/The Undefeated showed that 7 out of 10 Black

Americans say they have been unfairly treated by the health care system and 55% have some level of distrust of health care providers and systems. The article then showcases some methods for creating community outreach initiatives led by local health care providers and clinics to begin to establish trust between minority communities and health care professionals).

Multidimensional worries (anti-vax rhetoric coinciding with anxieties based in historical racism). Tha, coupled by low health agency (lack of health literacy), makes it difficult for Black individuals and some other minority communities to navigate the health system.

Lack of "community medical experts"

- Rhea Boyd, founder of The Conversation, a Black and Latino-led campaign to provide information and dispel information about vaccines, stated that focusing on finding a "trusted messenger" for minority communities is limiting (e.g., only 5% of the physician workforce is bBlack).

What/how platforms are discussing the issue?

- Many national outlets, including NPR, The Washington Post, and The New York Times, lump Black and Hispanic/Latino communities together when referencing vaccine hesitancy or COVID-19 health disparities.
- Community focused (e.g., speaking directly to Black communities)
  - Many community efforts are working to combat vaccine hesitancy among Black individuals. For example, Florida's Statewide COVID-19 Vaccine Community Engagement Task Force includes Black higher ed reps, business owners, media representatives and local pastors. Public health and communication experts state that both local and national campaigns are needed to provide information and build trust.
- Social media:
  - Research has found that social media platforms, particularly Facebook, circulated official COVID-19 vaccination information to far fewer Black people than other demographics, creating an environment where misinformation can thrive.

How is messaging currently being conducted?

- The Conversation
  - Website includes fact sheets, press release, video FAQ series (over 200 videos) in both English & Spanish, graphics/outreach materials for personal web/social engagement – all laid out in the Digital Toolkit
    - Ongoing research project tracking public attitudes about vaccinations
    - Materials Library
    - Health care workers impacted by COVID-19

Mass vaccination sites for education/vaccine deployment (these can reach a lot of people but sometimes not the most vulnerable in each group). Organizations like Black Doctors COVID-19 Consortium have provided walk-up services for people since January 2021.

What is working?

- While there is plenty of general information regarding the safety/efficacy of the vaccine and of the vaccination process, nuanced messages that address the specific sources of historical and current mistrust and disenfranchisement will address barriers. Improving health literacy and working to

combat language barriers is also critical and must be expanded based on community needs. That may help create culturally responsive and accessible public health messaging that directly addresses racial disparities in COVID-19.

- COVID-19 vaccine ambassadors (needs a more extensive search):
    - Barack and Michelle Obama, Samuel L. Jackson, Tyler Perry

What needs to be improved?

- Reporting is focused on either positive or negative vaccine narratives, considering both narratives as separate entities rather than recognizing the possibility for combining them to both recognize anxieties and accessibility issues as well as lift up the positives for vaccinations.
- A study done by CARE and the Yale National Clinician Scholars Program highlighted the need for recognizing historical mistreatment, unequal health outcomes for Black and Brown people due to historical structural racism embedded in the health care community, consistent and transparent communication between the community and *consistent* messaging to combat distrust.
- While there are many community leaders working to provide nuanced messaging and distribution tactics, the lack of collaboration between different campaigns (particularly those led by politicians or other national leaders) fail to consider on-the-groundwork and nuances that must be a part of an effective messaging campaign for different geographic regions.
- All strategies must acknowledge that vaccine contemplation and hesitancy are embedded in structural racism and therefore should provide clarity for the trustworthiness of health care systems and public health in general.

What/who is being left out of the conversation?

- Vaccine messaging must address, without repeating, the historical exploitation and violence Black individuals have faced, particularly regarding race-based experiments.
- Messaging should center establishing trust within Black communities. A historical mistrust coupled with rampant misinformation makes that difficult.

Conclusion

This document is meant to be a starting place for developing nuanced and impactful messaging and guidance for sustainable influence in our three priority communities: Rurally located (outside of Urban or suburban hubs), Native and Black Americans. Our research and recommendations should not be seen as a complete portrayal of the barriers, anxieties, or potential resonate messages of these communities. Rather, this insight guide is meant as a grounding tool for approaching specific communities to co-create a people-centered and relevant vaccination campaign.

We look forward to continuing conversations with NNPHI and its partners and building out strategic messaging with each of the grantees. If you have any questions, please contact Erin Uy at euy@spitfiresetrategies.com.

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Appendix

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