

COVID-19 State of Vaccine Confidence Insights Report

Report 5 | April 12, 2021 | Date Range: March 15–29, 2021



Summary

Findings. Vaccine supply is increasing nationally, and many states and jurisdictions have expanded, or plan to expand, vaccine eligibility to all people 16 years and older in the coming weeks. Consumers are optimistic that a return to normalcy is within reach due to the wider availability of vaccines. This optimism is undermined by growing online narratives that focus heavily on hypothetical or proposed vaccine mandates and proof-of-vaccination systems. Many consumers expressed concern about the legality and ethics of both requiring COVID-19 vaccination and tracking who is and isn't vaccinated. Consumers also continue to express confusion around guidance for those who are fully vaccinated. Households with fully vaccinated adults but unvaccinated children are seeking clarity about which COVID-19 prevention measures should be continued until their children can be fully vaccinated. Many parents feel hopeful that children 12 years and older may be able to be vaccinated in the coming months after the successful clinical trials for Pfizer-BioNTech's COVID-19 Vaccine in children. However, experts are divided about whether prioritizing vaccinating children will help to bring the pandemic to an end.

Ways to take action. Federal, state, and local partners should continue to work together to increase transparency, respond to gaps in information, and confront misinformation with evidence-based messaging. The goal of these efforts is to increase confidence in COVID-19 vaccines and expand vaccine uptake more broadly. Efforts should be made to continue to amplify information about the safety and effectiveness of COVID-19 vaccines. Additionally, research should be supported to better understand the role that vaccine mandates, proof-of-vaccination systems, and incentives play on an individual's motivation and intent to get vaccinated.



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The findings and conclusions in this report are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC).

Aims and Methods

By rapidly reviewing and analyzing numerous sources and inputs (see [Appendix](#)), the biweekly COVID-19 State of Vaccine Confidence Insights Report emphasizes major themes that influence COVID-19 vaccine hesitancy and uptake. This is categorized by their level and type of threat to vaccine confidence, degree of spread, and directionality. By examining how consumers think and feel, social processes, and the practical issues around vaccination, the Insights Report seeks to identify emerging issues of misinformation, disinformation, and places where intervention efforts can positively impact vaccine confidence across the United States.

The information in this report is only a snapshot, and certain populations may be underrepresented. Images and quotes are illustrative examples and are not meant to be comprehensive of all content related to the highlighted themes.

Theme Classification

How do you classify this theme/information?			
High risk	Moderate risk	Low risk	Positive sentiment
			
<ul style="list-style-type: none"> May lead to vaccine refusals and decreased uptake Wide reach, pervasive 	<ul style="list-style-type: none"> Potential to trigger hesitancy to vaccinate Moderate reach, modest dissemination 	<ul style="list-style-type: none"> Concerning, but low risk to vaccine confidence Limited reach, limited dissemination 	<ul style="list-style-type: none"> Could increase vaccine confidence, intent, or motivation Variable reach and dissemination

How has this theme/idea changed over time (since last report or over the course of multiple reports)?		
<p>Increasing Information spreading rapidly</p>	<p>Stable Information remaining constant at prior level</p>	<p>Decreasing Information is not gaining further traction and there has been no indication of additional activity</p>

Major Themes



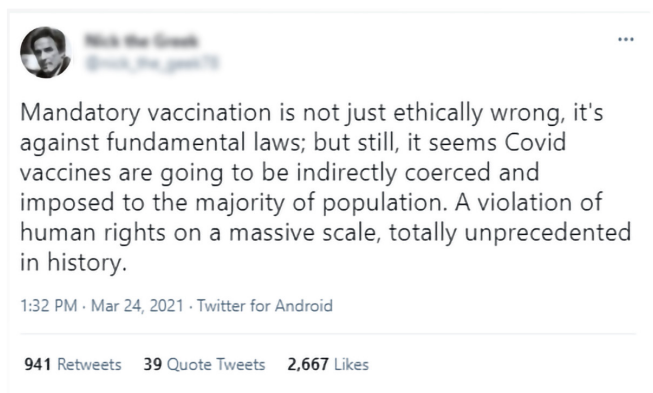
Hypothetical and proposed COVID-19 vaccine mandates are polarizing consumers.

With many states and jurisdictions expanding vaccine eligibility to people 16 years and older, media and consumers are discussing the possibility of schools, universities, and employers mandating vaccines. Rutgers University, the state university of New Jersey, was the first to announce that it is requiring students attending classes in person this fall to receive a COVID-19 vaccine, with other institutes of higher education following suit.^{1,2} Although consumers met this mandate with mixed results, many noted that requiring vaccination is not new for institutions of higher education.^{3,4} In the corporate sector, 7 in 10 chief executive officers indicated they were open to requiring COVID-19 vaccination for their employees and are exploring incentives to increase vaccine uptake among employees.⁵ Many consumers noted they would feel more comfortable returning to the office if COVID-19 vaccination were required.⁶ However, consumers against vaccine mandates are leading conversations online focused on the legality and ethics of vaccine mandates for vaccines available through an emergency use authorization (EUA).⁷

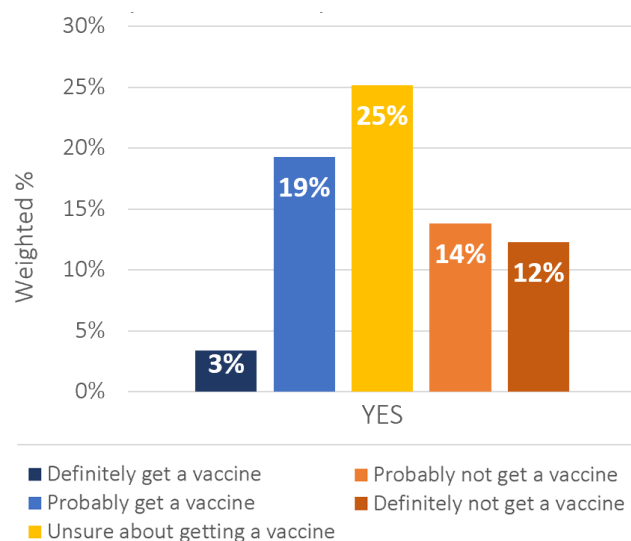
Consumers who expressed concern about or who were against vaccine mandates claim that the COVID-19 vaccines are “experimental” and that full approval by the Food and Drug Administration (FDA) is necessary before any vaccine can be mandated or required.^{8,9,10} Concerns about vaccine mandates are not just circulating among consumers. A recent survey found 1 in 6 healthcare workers would leave their job if their employer required them to get vaccinated.¹¹ However, new data indicate that COVID-19 vaccine mandates may increase motivation to get vaccinated for some of those who are currently unsure about getting vaccinated. While vaccine mandates have potential to incrementally increase vaccine uptake, they could alternatively harden opinions against vaccination by those who are undecided or wanting to “wait and see” before deciding to get vaccinated.^a

Ways to take action:

- Continue to promote messages about the safety of COVID-19 vaccines, highlighting the low rates of adverse events. Expand messaging on the Emergency Use Authorization (EUA) process, including as the timeline from EUA to FDA approval and how CDC and FDA analyze safety and effectiveness data before authorization and recommendation. Clarify that states and employers can mandate vaccination, but the federal government cannot.
- Engage with partners, such as institutions of higher education and the private sector, to better understand the concerns and information gaps among their constituents and develop tools and educational content as needs are determined.
- Support research to better understand the impact of vaccine mandates, ‘soft’ mandates (e.g., requiring full or extra personal protective equipment if not vaccinated), and other incentives on vaccine intention and motivation.



Which of the following would make you more likely to receive the COVID-19 vaccine ... **if your workplace or school required it?**



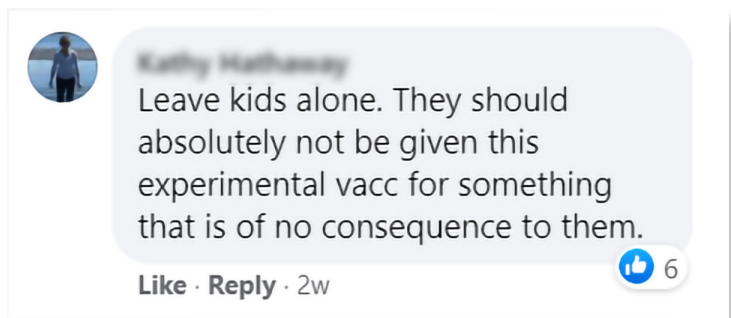
Source: Unpublished data. For methods and previous Omnibus data please see: Nguyen KH, Srivastav A, Razzaghi H, et al. COVID-19 Vaccination Intent, Perceptions, and Reasons for Not Vaccinating Among Groups Prioritized for Early Vaccination — United States, September and December 2020. MMWR Morb Mortal Wkly Rep 2021;70:217–222. DOI: <http://dx.doi.org/10.15585/mmwr.mm7006e3>

^a Unpublished data. For methods and previous Omnibus data please see: Nguyen KH, Srivastav A, Razzaghi H, et al. COVID-19 Vaccination Intent, Perceptions, and Reasons for Not Vaccinating Among Groups Prioritized for Early Vaccination — United States, September and December 2020. MMWR Morb Mortal Wkly Rep 2021;70:217–222. DOI: <http://dx.doi.org/10.15585/mmwr.mm7006e3>



Consumers are confused about the role of vaccinating children on the path to population immunity.

Although fewer cases of COVID-19 have been reported in children (age 0–17 years) than in adults, recent data suggest the number and rate of cases in children has been steadily increasing and more children have died from COVID-19 than from the flu in an average year.¹³ Increases in childhood cases have given rise to varying opinions among both scientists and parents about how critical it is that children be immunized as schools seek to fully reopen.¹⁴ Additionally, although the guidance for [fully vaccinated individuals](#) has expanded, consumers expressed confusion about the extent to which households with unvaccinated children should proceed with preventative and safety measures and/or return to pre-COVID-19 activities.¹⁵ Some experts feel vaccinating children is not a top priority due to lower transmission rates, whereas others believe vaccinating children is crucial to ending the pandemic. Some researchers say that given adults’ current hesitancy toward COVID-19 vaccination, population immunity might be impossible to achieve without vaccinating children.^{16,17,18,19}



“The sooner that we can get vaccines into as many people as possible, regardless of their age, the sooner we will be able to really feel like we’re ending this pandemic for good,” Angela Rasmussen, PhD, a virologist affiliated with Georgetown University in Washington.¹²

While many parents expressed optimism with the release of clinical trial data showing that Pfizer-BioNTech’s COVID-19 vaccine was safe and effective in adolescents as young as 12 years old,²⁰ others expressed concern and discomfort, stating that children were being used as “test subjects.”^b Other parents worry that COVID-19 vaccines may be required for attending school in the fall and that religious or other vaccination exemptions may not be granted.^c These concerns could further alienate parents who are generally vaccine-hesitant. Recent polls show that parents who were vaccine hesitant are mostly unwilling to vaccinate both themselves and their children when COVID-19 vaccines are available to them.²¹

Ways to take actions:

- Expand guidance for [fully vaccinated individuals](#) to thoroughly explain the risks and safety precautions still needed for activities between households with fully vaccinated adults and unvaccinated children. Develop and promote messages for fully vaccinated adults with unvaccinated children about activities they can safely participate in and who they can safely visit and spend time with.
- Share clear, complete, and accurate messages about COVID-19 vaccination in children to build trust in the vaccines and the health system prior to vaccine authorization and recommendation for children. Provide regular updates on what is known about the benefits, safety, side effects, and effectiveness of COVID-19 vaccines for children.
- Develop specific messages and tools for pediatric and family healthcare providers to use in discussing the benefits of COVID-19 vaccination for children with parents who are uncertain about, or leaning toward, not getting themselves or their children vaccinated.
- Support research to better understand the opinions and concerns of vaccine-hesitant parents on COVID-19 vaccines and of school-age children’s perspectives to better inform future communication campaigns and outreach efforts.

^b Social Listening Team. *COVID-19 Interagency Social Listening Report*. Washington, DC, Federal Emergency Management Agency; March 16, 2021.

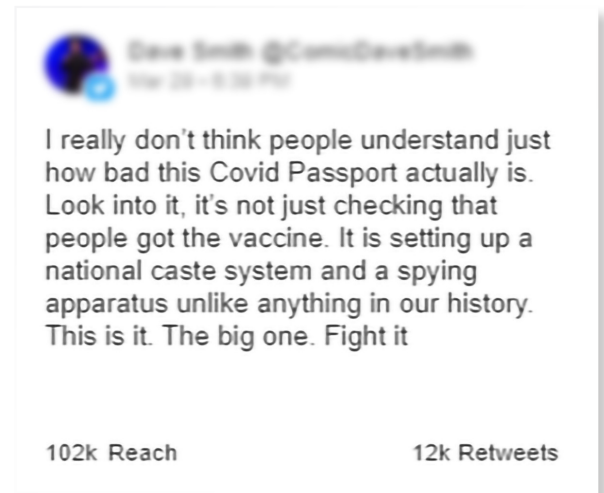
^c Social Listening Team. *COVID-19 Interagency Social Listening Report*. Washington, DC, Federal Emergency Management Agency; March 17, 2021.



Negative sentiment increasing among consumers over the concept of vaccine passports.

New York State introduced the first “vaccine passport” as a digital app called the “Excelsior Pass,” allowing residents to prove they have been fully vaccinated or have recently tested negative, in an effort to quickly reopen businesses in the state.^{22,23} The goal of proof-of-vaccination systems, like the Excelsior Pass, is for fully vaccinated people to quickly and easily verify their vaccination status so they can bypass state mandates on large-group activities and travel.^{24,25} However, large segments of the population are vocally opposed to proof-of-vaccination systems, citing distrust of government systems, federal governmental overreach, medical surveillance, and segregation.²⁶

There is some evidence that using a uniform proof-of-vaccination system throughout the United States could motivate vaccine-hesitant consumers to get vaccinated.²⁷ However, some experts fear that vaccine passports could be a form of discrimination²⁸ and could further exacerbate racial, ethnic, and income inequities already present with current vaccine distribution and administration strategies.²⁹ As a result, there has been a rise in consumers looking to purchase counterfeit vaccination cards to undermine these systems and gain access to travel or other activities.^{30,31,32} A confusing or ineffective proof-of-vaccination system could undermine trust in health systems and government and further politicize the broader vaccination effort.^{33,34}



Ways to take action:

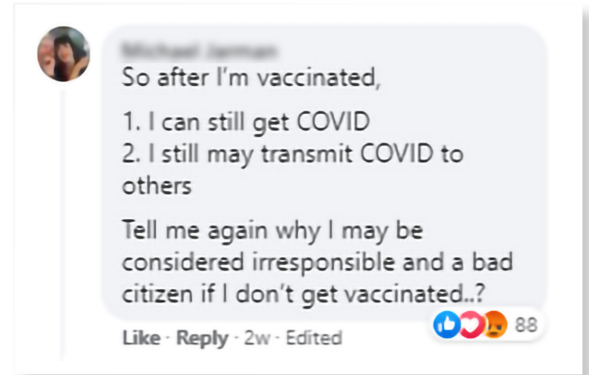
- Support research to better understand how proof-of-vaccination systems may contribute to or undermine vaccine confidence and the population’s willingness to get vaccinated. Gather information on people’s thoughts and feelings toward sharing private health information and message framing that may work best to explain the rationale for these types of systems.
- Limit the use of counterfeit vaccination cards by identifying emerging practices for managing proof-of-vaccination systems, including what consumers should do if they lose their vaccination card, and determine methods to validate someone’s vaccination status. To protect personal information, consider promoting messages about not sharing images of vaccination cards and instead encouraging consumers to share photos of their bandage or vaccination sticker.
- Partner with states and jurisdictions to identify the many factors contributing to low vaccine uptake, including vaccine confidence and structural and practical barriers. Conduct [a rapid community assessment](#) to identify intervention strategies to increase uptake and identify community leaders and trusted messengers to reach communities with low COVID-19 vaccine uptake. Proof-of-vaccination systems may provide individuals with greater access to public spaces, travel, and even job opportunities; therefore, it is important to ensure all consumers who want to get vaccinated, can get vaccinated.

Emerging Themes



Consumers are confused about the effectiveness and benefit of COVID-19 vaccines with reports of breakthrough cases and increasing cases of illness.

Media coverage of the rising vaccine administration numbers is bringing hope to consumers that they will soon be able to return to their pre-pandemic lives. Simultaneous messages of “impending doom,”³⁵ the threat of a new wave of COVID-19 cases,³⁶ and increasing reports of breakthrough cases among fully vaccinated people push the desired timeline for return to normalcy out of reach.³⁷ Online conversations about vaccine effectiveness remain prevalent. However, current discourse has shifted focus from how well COVID-19 vaccines prevent illness to confusion over whether COVID-19 vaccines can prevent asymptomatic transmission, which may diminish the perceived benefit of vaccination.^{38,39}



Ways to take action:

- Continue to develop and disseminate messaging about COVID-19 vaccination benefits, vaccine effectiveness, and what is known about the effects of vaccination on asymptomatic spread. Ensure messages contain information about what COVID-19 vaccines were developed to do and how vaccines work more generally. Continue to promote benefits of COVID-19 vaccination alongside messages about guidance for fully vaccinated individuals.
- Expand research to better understand the perceived benefits of COVID-19 vaccination, what consumers think about breakthrough cases, and how these cases might impact their intention to get vaccinated for COVID-19.



Generation Z adults are less interested in COVID-19 vaccines due to low risk perception.

Recent polls show that not only are some Generation Z adults (under 25 years old) disinterested in getting a COVID-19 vaccine,⁴⁰ but they are also the least aware of guidance [for fully vaccinated individuals](#). This might imply that Generation Z adults are unaware of the benefits of vaccination, thus contributing to the lack of enthusiasm toward a COVID-19 vaccine. Additionally, adults in Generation Z make up the highest percentage of people wanting to “wait and see” before deciding to get vaccinated. The level of vaccine confidence among this generation has remained stable over time, unlike other generations that have seen increased vaccine confidence since initial COVID-19 vaccine distribution began.^d

Gen Z Interest in COVID-19 Vaccine Plummets as Country Reopens, New Poll Finds

NBCLX/Morning Consult survey also finds vaccine skepticism growing among Hispanics one year into the coronavirus pandemic

By Noah Pransky • Published March 24, 2021 • Updated on March 24, 2021 at 9:10 am



Ways to take action:

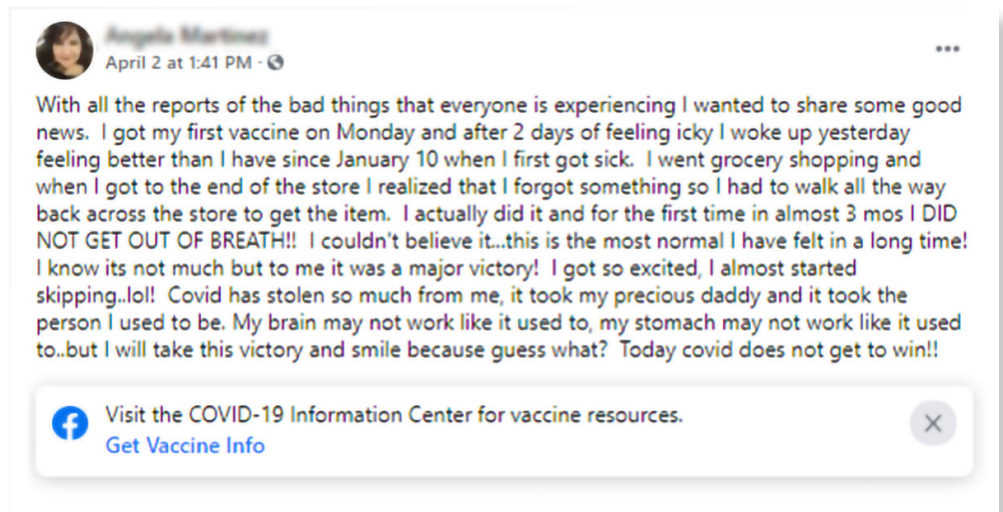
- Develop a communication strategy that appeals to social responsibility^d while also promoting vaccination as the best action to return to normal, recognizing the impact that COVID-19 has had on their social and academic experience. Additionally, frame messages with a positive sentiment, focusing on what vaccination will allow individuals to do safely rather than what individuals still cannot do.
- Work with states and jurisdictions to partner with Generation Z-led or Generation Z-focused organizations to identify and engage influencers to promote vaccination and continued adherence to COVID-19 preventive measures.
- Perform message testing to better understand the types of messages, graphic assets, channel placement, and types of messengers needed to increase motivation and intent to be vaccinated.

^d Harris Insights & Analytics LLC, A Stagwell Company. (2021). *The Next Greatest Generation: The Harris Poll CDC Youth Survey*.



Anecdotal evidence suggests consumers experiencing “long COVID” may benefit from COVID-19 vaccination.

A recent study found that about 3 in 10 COVID-19 patients reported experiencing persistent symptoms for as long as 9 months after illness, referred to as “long COVID” or “long-haul COVID.”⁴¹ Personal testimonies have emerged about vaccination improving symptoms of long COVID, including a poll of a Facebook group for COVID-19 survivors that found about 1 in 3 people with long COVID reported improved to complete resolution of symptoms after vaccination.⁴² However, more research is needed to determine how or why some long COVID-19 patients see marked improvements after vaccination.⁴³



Ways to take action:

- Identify partners and organizations that work with long COVID patients to collect testimonies about vaccination and the challenges they faced or currently face from COVID-19 symptoms and negative outcomes.
- Conduct research to better understand the impact and potential benefit of vaccination for long COVID patients and, if there is a demonstrated benefit, explore how it may affect willingness to get vaccinated among people who have been previously infected with the virus.

Continuing and Evolving Themes

Themes below have been noted in previous reports and continue to undermine vaccine confidence. For additional context and previous recommendations on these themes see previous Insights Reports.^{e,f,g,h}

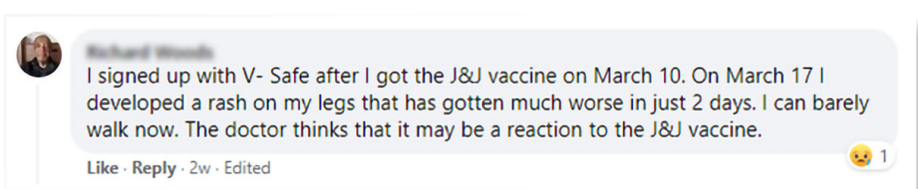
- Access/logistics.** Barriers to access, ranging from vaccination site location to cumbersome appointment systems, continue to exist for communities of color, older adults, people with disabilities, and non-U.S.-born consumers in scheduling both first and second dose appointments.^{44,45,46} Additionally, there were a growing number of reports of consumers who are undocumented being turned away from vaccination.^{47,48} Conversations surrounding vaccination planning for homebound older adult populations, people with disabilities, and people experiencing homelessness are also beginning to increase.^{49,50}

Homeless population pleas state officials to bring COVID-19 vaccine to them

Nicholas Papantonis · 3/24/2021



- Adverse events/side effects.** The media and vocal vaccine deniers continue to amplify reports of adverse events and deaths following vaccination, despite an absence of known cause.^{51,52} Consumers continue to turn to social media in addition to their healthcare providers, v-safe, and CDC-INFO to report their side effects, both common and severe.^{53,54}



- Brand preferences.** Consumers expressed concern over AstraZeneca’s COVID-19 Vaccine. These concerns were driven by reports of outdated data to determine COVID-19 vaccine effectiveness for their United States clinical trial⁵⁵ and a disputed connection to blood clots.^{56,57,58} Consumers reported that the news about AstraZeneca’s COVID-19 Vaccine made them concerned about all COVID-19 vaccines, which could lead them to delay.⁵⁹ *New ways to take action:*
 - Develop and deploy messaging about how the U.S. vaccination system ensures all vaccines are safe, specifically about how causality between vaccination and adverse events is determined. Continue to promote messages that all authorized and recommended COVID-19 vaccines are safe and effective.

- Conservative populations.** A new “Stop the Vaccine” movement has emerged, warning consumers that as vaccination rates decrease, “more aggressive force” from the government will be used to vaccinate people who are not yet vaccinated.⁶⁰ Persons who view conservative media and engage with conservative social media sites continue to be exposed to messages stating that “immunity through infection” is the optimal way to gain protection,⁶¹ despite a declaration from a group of researchers stating the danger of using this tactic to reach population immunity.⁶²

- Mis- and dis-information.** With tech companies expanding their efforts to remove or flag potentially misleading content, vocal vaccine deniers are finding new tactics to spread misinformation. A recent study found that article headlines that connected death and vaccination were among the most engaged with and are more difficult for tech companies to identify and flag appropriately.^{63,64} Additionally, consumers are increasingly concerned that tech companies are unable to remove misinformation in languages other than English at the same rate as English language posts.⁶⁵ *New ways to take action:*
 - Engage media and journalists in dialogue about how news articles are being weaponized and misrepresented to decrease vaccine confidence. Strategize tactics for reducing misrepresentation of articles on social media, such as ensuring additional context is built into auto-generated images on article links.
 - Partner with tech companies to expand and enhance methods for removing and flagging misinformation or vaccine-related content in non-English posts. Ensure that social media flags go to appropriate content hubs in the same language as the original post.

'Ya Basta Facebook' Says Company Must Curb Misinformation In Spanish

March 16, 2021 · 12:00 PM ET



e Insights Unit, *Vaccinate with Confidence Team. State of vaccine confidence report: Report 1.* Atlanta, GA: Vaccine Task Force, Centers for Disease Control and Prevention; 2021.
 f Insights Unit, *Vaccinate with Confidence Team. State of vaccine confidence report: Report 2.* Atlanta, GA: Vaccine Task Force, Centers for Disease Control and Prevention; 2021.
 g Insights Unit, *Vaccinate with Confidence Team. State of vaccine confidence report: Report 3.* Atlanta, GA: Vaccine Task Force, Centers for Disease Control and Prevention; 2021.
 h Insights Unit, *Vaccinate with Confidence Team. State of vaccine confidence report: Report 4.* Atlanta, GA: Vaccine Task Force, Centers for Disease Control and Prevention; 2021.

Appendix: Inputs and Sources

Type	Input	Cadence	Sources	Tactics for Utilization
Mixed Methods	Communication Surveillance Report	Daily, weekdays	<ul style="list-style-type: none"> Google news Meltwater CrowdTangle Native platform searches 	<ul style="list-style-type: none"> Share of voice topic analysis to identify themes Emerging topics
	Tanaq Social Listening +Media Monitoring Report	Weekly	<ul style="list-style-type: none"> Meltwater Muck Rack Sprout Social First Draft Stronger Native platform searches 	<ul style="list-style-type: none"> Trending topics Demographic and geographic conversation monitoring
	Meltwater	Daily	<ul style="list-style-type: none"> Facebook, Twitter, Instagram Blogs News media Online forums 	<ul style="list-style-type: none"> Share of voice topic analysis Emerging theme topics Identify high reach/velocity topics
Social Media Listening	OADC Channel COVID-19 Post metrics	Weekly	<ul style="list-style-type: none"> Sprout Social Native OADC account analytics 	<ul style="list-style-type: none"> Analyze # of posts, topics Success of messages, # of impressions, reach, # engagements
	OADC Channel Comment Analysis	Daily, weekdays	<ul style="list-style-type: none"> Native platform searches 	<ul style="list-style-type: none"> Sentiment analysis Identify message gaps/voids
	CrowdTangle content insights report	Biweekly	<ul style="list-style-type: none"> Facebook 	<ul style="list-style-type: none"> Top pages (voices), groups General trends/sentiment analysis News analysis through posts
	FEMA Social Listening Report	Daily	<ul style="list-style-type: none"> Hootsuite Brandwatch CrowdTangle Meltwater 	<ul style="list-style-type: none"> Trends/sentiment analysis National and global news analysis
Direct Reports	CDC-INFO Metrics	Weekly, Mondays	<ul style="list-style-type: none"> CDC-INFO inquiry line list Prepared response (PR) usage report 	<ul style="list-style-type: none"> Cross-compare PR usage with inquiry theme analysis Sentiment analysis Identify information gaps/voids
	VTF Media Requests	Weekly, Mondays	<ul style="list-style-type: none"> Media request line list 	<ul style="list-style-type: none"> Leading indicator for news coverage Identify information gaps/voids
	Web Metrics	Weekly, Wednesdays	<ul style="list-style-type: none"> Top pages Google search queries Top FAQs Referring domains 	<ul style="list-style-type: none"> Identify information gaps/voids, Identify keywords/search terms, changes in web traffic
Research	Poll Review	Weekly, Mondays	<ul style="list-style-type: none"> Harris Poll, PEW research, Gallup Poll, KFF New data related to vaccine hesitancy 	<ul style="list-style-type: none"> Identify socio-behavior indicators related to motivation and intention to vaccinate
	Literature Review	Weekly, Mondays	<ul style="list-style-type: none"> PubMed, LitCovid, ProQuest Central New data related to vaccine hesitancy 	<ul style="list-style-type: none"> Identify current vaccination intention Identify barriers to vaccination