

COVID-19 State of Vaccine Confidence Insights Report

Report 1 | February 12, 2021 | Date Range: January 24, 2021 – February 6, 2021



Summary

Public trust in the U.S. to manage COVID-19 vaccination is slowly improving, but we have much more work to do. Consumers are frustrated and confused about states and jurisdictions' varied prioritization plans, insufficient systems for scheduling appointments, and inequitable access to COVID-19 vaccine. Concurrently, information about adverse events and serious side effects is being highlighted and spread across digital and print media; anti-vaccine supporters may also be intensifying fears and concerns of those who choose to "wait and see" or those less inclined to get vaccinated. Coordination with states and jurisdictions to increase transparency, address systemic barriers, and confront circulating rumors is necessary and essential to increase vaccine confidence broadly.



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- 4 Concerns about vaccine side effects decreasing vaccine confidence
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Aims and Methods

The Insights Report examines the state of the vaccine confidence field on a biweekly basis to ascertain where CDC—and the Vaccine Task Force in particular—has the potential to impact science, communication, and action. By rapidly reviewing and analyzing numerous sources of digital media, print media, peer-reviewed research, polling data, social listening platforms, CDC-INFO, and web metric data, the Insights Report strives to emphasize major themes in COVID-19 vaccine confidence influencing hesitancy and uptake. 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 impact vaccine confidence across the U.S.

Major Themes

States and jurisdictions’ differing vaccine prioritization plans causing confusion and inequitable distribution

BeSD domains affected: **Thinking and feeling** – Perceived risk and trust; **Social processes** – Vaccination provider and health system recommendations; **Practical issues** – Vaccine availability, appointment access, changes in eligibility status

States and jurisdictions have the freedom to enact their own vaccine prioritization plans. **Consumers are confused** about their eligibility status and why their eligibility may change over time, between states, and even within membership groups.^{1,2} Frustration and concern about vaccine eligibility and prioritization dominate the conversation. Eligibility and prioritization are prominent themes in JIC’s daily communication surveillance report, among CDC’s most viewed FAQs, and account for a considerable proportion of Google searches related to COVID-19 vaccines.

Over 1,500 calls per week to CDC-INFO focus on a lack of adequate appointments, and questions are raised about **lack of equity in the prioritization process**. A perceived or actual lack of vaccine supply has resulted in the phenomenon of “vaccine hunters” — “hunters” and “tourists” that travel to find states where they meet prioritization standards, serving to further exacerbate supply issues, perceptions of unfairness, and inequitable vaccine access.³

In some states, demand and capacity to administer doses are greater than the number of available vaccine doses.⁴ This pattern is even more prominent in rural areas, where residents and clinicians are frustrated at the lack of available doses to allocate to jurisdictions. Such limited resources, staffing, and storage restrict vaccination capacity when compared to larger urban areas.⁵

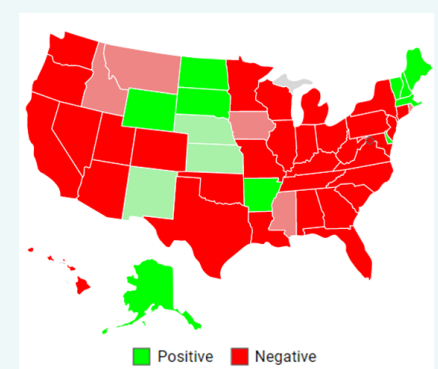
Short-term recommendations

- **Offer clear and transparent information** about how distribution plans translate to vaccine doses available and eventual vaccinations administered. Depict how changes in demand may influence supply and anticipated availability of vaccines in the following weeks and months. Perceptions of vaccine scarcity and unequal distribution are fueling panic and distrust of the vaccine rollout process.
- Work with states and jurisdictions to **publish vaccination location maps and eligibility criteria on a regular basis and determine promising practices to disseminate**. Assist states and jurisdictions in building capacity to manage this process.

Long-term recommendations

- Partner with states and jurisdictions to work toward a **centralized, simple, and transparent eligibility process**. **Rely on well-established partnerships and community ambassadors** to communicate a streamlined plan, with predetermined eligibility guidelines.
- Work with states to **use uptake data to drive subsequent phases of the prioritization and allocation process**, and continually adjust distribution plans as often as necessary.

Negative Sentiment about Vaccination Pervasive



Negative sentiment includes:

- Vaccine rollout (overloaded appointments, frustration with eligibility, people skipping line, etc.)
- Racial disparities with availability, white Americans seeking vaccines in minority community settings
- Hesitancy (“false claims,” side effects, misinformation)

NCIRD Weekly Social Listening Report, COVID-19 Vaccine Communication. 2021, February 8.

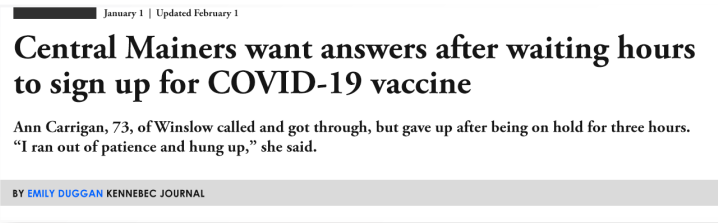
High-priority populations facing physical and digital barriers to vaccination

BeSD domains affected: **Thinking and feeling** – Trust; Social processes – Vaccination provider and health system recommendations; **Practical issues** – Vaccine availability, appointment access, location access

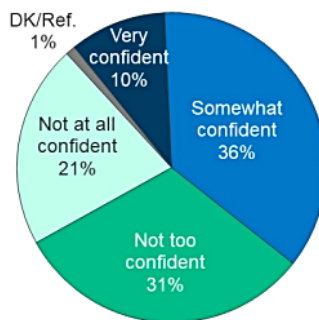
As wider vaccination efforts begin across the United States, issues with the systems used to schedule and register people for appointments have been widespread. Some states and jurisdictions have had to either stop scheduling appointments due to an overburdened system⁶ or create lottery systems to meet the high demand.⁷ Many older adults report various problems with their vaccination appointments, including not knowing how to schedule an appointment, not knowing where to get vaccinated, or long wait times upon arrival.⁸ About one out of every four calls to CDC-INFO concerns barriers to appointment access. **Difficulties in accessing appointments can translate into feelings of mistrust** and helplessness, which can subsequently weaken vaccine uptake.

Physical barriers are also contributing to access issues among underserved populations. Minority neighborhoods have fewer vaccination sites than their white counterparts,^{9,10} and vaccination sites are often located in more affluent and whiter areas where infrastructure already exists, suggesting that minority residents must travel farther for vaccinations.¹⁰ **Black and Hispanic populations also report feeling that vaccine distribution is not taking their needs into account.**¹¹

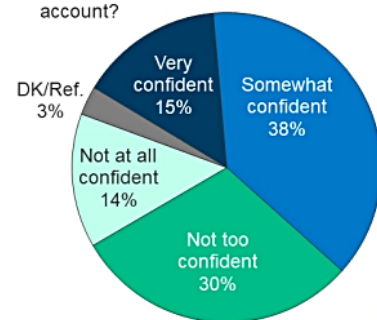
This includes not having vaccination sites in or close to their communities, not having appointments available outside of normal working hours, or not having time built into their vaccination appointment to discuss concerns with providers.¹²



AMONG BLACK ADULTS: How confident are you that the distribution of a coronavirus vaccine is taking the needs of Black people into account?



AMONG HISPANIC ADULTS: How confident are you that the distribution of a coronavirus vaccine is taking the needs of Hispanic or Latino people into account?



SOURCE: KFF COVID-19 Vaccine Monitor (Jan. 11-18, 2021). See topline for full question wording.

KFF COVID-19 Vaccine Monitor

Short-term recommendations

- **Identify states and jurisdictions that have overcome scheduling and appointment barriers** and share innovative strategies and approaches with those facing challenges in balancing vaccine supply, demand, and administration. Assess ongoing Vaccine Administration Management Systems (VAMS) frustrations to identify functions needing improvement to ensure a more robust vaccine administration system.
- **Work with states and jurisdictions to develop plans for excess end-of-day vaccine doses.** Determine how those doses should be distributed quickly and equitably, especially among current priority populations. Consider developing tiered contact lists to reach out to people who need doses urgently.

Long-term recommendations

- **Engage community leaders and partner with novel vaccination sites in high-burden areas** (e.g., Historically Black Colleges and Universities, polling sites, community centers, religious facilities) and do not limit vaccination sites to areas that already have existing infrastructure.
- **Identify promising practices related to scheduling timely second dose vaccine appointments.** Work with states and jurisdictions to consider creating a centralized hub for second dose appointments and schedule second vaccination appointments immediately after patients receive their first dose.¹³

Misinformation about adverse events and side effects decreasing confidence in COVID-19 vaccines

BeSD domains affected: *Thinking and feeling* – Trust and safety concerns; *Social processes* – Influencer, vaccination provider and health system recommendations, information sharing and norms in social networks, exposure to rumors and mis/disinformation

Media has seized upon stories of individuals who have died¹⁴ or had a significant reaction soon after receiving a COVID-19 vaccine, regardless of context. This coverage has been met with an abundance of public comments reflecting personal stories of illness following vaccination.^{15,16} At the same time, a subset of health professionals is also posting to social media as “whistleblowers,” citing significant side effects or adverse events, such as deaths of the elderly in long-term care facilities following vaccination.¹⁷ Such reporting and public comments are magnifying fear and raising questions about the underreporting of adverse reactions by healthcare professionals and the health system, eroding trust in the vaccine and those who promote vaccination.

There is misrepresentation of adverse events, using data derived from the Vaccine Adverse Event Reporting System (VAERS), which are easy for the public to download.¹⁸ Anti-vaccine supporters are sharing and aggregating reported episodes, manipulating the information to support a causal relationship between vaccination and subsequent death; such posts are widely circulated and shared.¹⁹

Some of the public is turning to the wrong sources for clinical advice; high levels of dangerous reactions after vaccination are being reported to agents using CDC-INFO. The public also perceives the [v-safe after vaccination health checker](#) to be a link to medical assistance. During the report period, 1 in 5 calls to CDC-INFO were from individuals with troubling clinical symptoms and appeared to necessitate urgent care by a trained clinician – most also expected callbacks from V-safe immediately.

I am very concerned that my daughter has had a reaction to the Moderna vaccine, which caused her to go to the emergency room along with being treated for 10 days at home. No one has contacted her... this is scary. She is registered with V- safe and no one has contacted her.
—CDC-INFO call, 1/25

Short-term recommendations

- **Establish reasonable expectations for the public regarding v-safe.** Be clear on the role of CDC after vaccination, including when and if users should expect personalized health check-ins, whether they should expect follow-up calls from CDC clinicians or other personnel, and whom they should contact locally if they are experiencing troubling and persistent side effects.
- **Develop messaging related to VAERS**, how the system works, its limitations, and how consumers should interpret the data.

Long-term recommendations

- **Address perceptions of adverse events** and deaths head-on with transparent and complete communication. With clear and direct messaging, regularly update the public on what is known, not known, and how this information might change as more people are vaccinated.
- Partner with trusted messengers, including faith leaders, community leaders, and local healthcare personnel; empower these ambassadors to **directly address myths and misinformation about vaccine safety.**

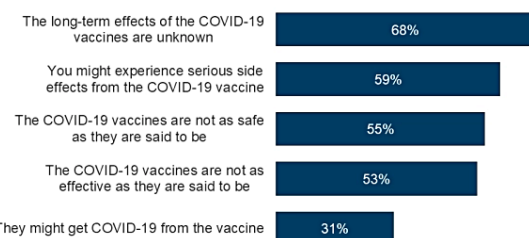
Concerns about vaccine side effects decreasing vaccine confidence

BeSD domains affected: *Thinking and feeling* – Trust and safety concerns; *Social processes* – Influencer, vaccination provider and health system recommendations, information sharing and norms in social networks, exposure to rumors and mis/disinformation

A leading reason for vaccine reluctance among unvaccinated adults is concern about side effects.²⁰ The possibility of long-term effects and serious side effects is the most common concern among those who have not yet been vaccinated or who have received only one dose, with Black and Hispanic adults particularly concerned and hesitant.²¹ Additionally, the majority of **unvaccinated adults report that they do not have enough information about COVID-19 vaccine side effects.**²¹

People are turning to the web and social media for advice and clarity, with a quarter of the top 500 Google searches related to COVID-19 vaccines focusing on side effects, long-term effects,

Percent who say they are **very** or **somewhat** concerned about each of the following:



NOTE: Among those who have not been vaccinated against COVID-19
SOURCE: KFF COVID-19 Vaccine Monitor (conducted Jan. 11-18, 2021). See topline for full question wording.

or adverse events. However, on social media, those who received at least one vaccine dose commented about the side effects; these effects were most often described as mild, temporary, or absent.^{22,23,24}

Short-term recommendation

- **Communicate what is known about vaccine side effects and normalize the side effects** that are known to occur. Share data on the likelihood of experiencing mild to no side effects versus severe side effects per v-safe data and other safety data sources.

Long-term recommendation

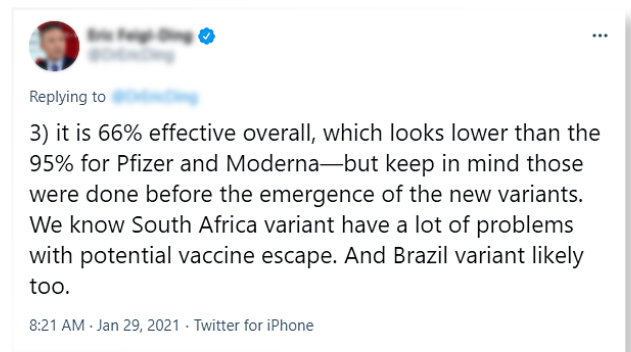
- **Identify states and jurisdictions where COVID-19 vaccination series completion is high** to see what techniques have been used to address concerns about side effects and ensure that people receive their second dose. Share those innovative strategies widely.

Emerging Topics

Concerns increasing about effectiveness of vaccines against variant SARS-CoV-2 strains

BeSD domains affected: **Thinking and feeling** – Trust and safety concerns

One in 4 media inquiries to the Vaccine Task Force focused on worries about efficacy of vaccines, including the one from Johnson and Johnson. Conversations related to variant strains encompass the possibility of changing the time between doses, prioritizing more people for their first dose,²⁵ and the possibility of booster vaccines.²⁶ However, experts and manufacturers warn there are insufficient data to support changing the timing between doses and that waiting longer between doses could result in less protection.²⁷ FDA is expected to release new guidelines about booster shots in the coming weeks.²⁸



Short-term recommendations

- Reinforce messages that vaccination is a safe way to build protection, including how vaccination reduces the likelihood of moderate to severe illness.
- Develop messaging about what is known and not known about the effect of variant strains on currently available vaccines, and expand content on [emerging strains web page](#).

Confusion about maintaining mitigation measures after COVID-19 vaccination.

BeSD domains affected: **Thinking and Feeling** – Perceived risk; **Social processes** – Norms in social networks regarding adherence and mitigation

Consumers are confused about whether or not vaccinated individuals can still carry and spread the virus, even if they don't have symptoms²⁹ and wondering how long mitigation methods will need to continue after they are vaccinated or most people in the country are vaccinated.³⁰ Returning to "normal" is a motivational factor for many seeking to get vaccinated. Many are unclear what practices they will need to maintain once fully vaccinated and whether mitigation measures are recommended to continue for an extended time; 22% of people said that they will feel safe enough to return to normal in-person gatherings once everyone in their circle is vaccinated.³¹ Media interest and views of FAQs on the topic on CDC's website have increased. Dr. Fauci said new guidelines related to mitigation efforts would be shared soon.³²

Short-term recommendations

- Integrate vaccination messaging into mitigation "takeaways" for all communication products.
- Develop messaging about what is known and not known about asymptomatic spread after vaccination, including prevention messages.

Concerns that COVID-19 vaccines reduce both female and male fertility

BeSD domains affected: *Thinking and feeling* – Perceived risk and trust; **Social processes:** Vaccination provider and health system recommendations, information sharing and norms in social networks, exposure to rumors and mis/disinformation

Rumors that COVID-19 vaccines cause miscarriages and reduce fertility in both males and females continue to circulate widely.^{33,34} Prominent anti-vaccine voices point to data on VAERS³⁵ and assert that the FDA has not actually approved the vaccine for pregnant women.³⁴ While there is no evidence that the vaccines currently authorized and recommended pose a risk to pregnant women,³⁷ there are limited data about the safety of COVID-19 vaccines for people who are pregnant. Consumers are additionally confused due to changing guidance on the topic—WHO initially recommended against use³⁸ and then altered its guidance a few days later,³⁹ with guidelines not matching CDC's.⁴⁰

Jay Huber, a fertility doctor in New Orleans, is asked daily by his patients if the vaccine causes infertility. He said there's no evidence of that happening. So then, what is the biggest misconception? "This concept that the vaccination will actually train the human immune system to create an antibody that would cross-react with the vital placenta protein, which would ultimately cause infertility," he said.³³

Short-term recommendations

- Partner with OB/GYNs and adjacent organizations to develop and disseminate messaging, tools, and resources about COVID-19 vaccines because recommendations from healthcare providers are the most important factor in maternal decision-making.⁴¹
- Identify data from v-safe about pregnant women who have received the vaccine and discern if any of the information can be used to create messaging about the safety of COVID-19 vaccination during pregnancy.

Confusion that taking ibuprofen before vaccination could reduce effectiveness

BeSD domains affected: *Thinking and feeling* – Perceived risk, trust and safety concerns; **Social processes** – Vaccination provider and health system recommendations, information sharing and norms in social networks, exposure to rumors and mis/disinformation

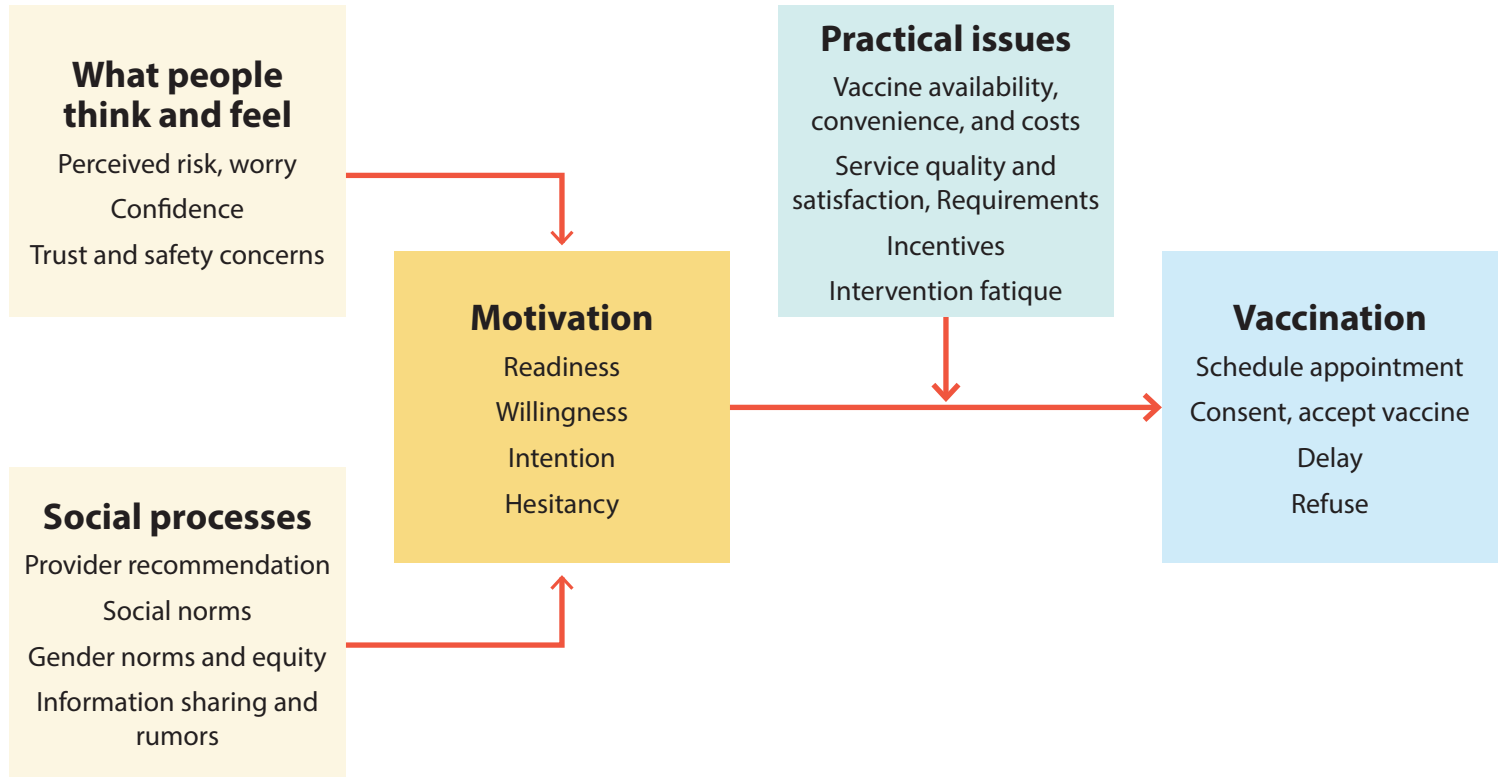
A recent study found that NSAIDs “reduced both the antibody and pro-inflammatory cytokine response to SARS-CoV-2 infection,” which may indicate NSAIDs impact the body’s response to vaccination.⁴² Although the study did not address vaccination, media coverage of the story was misleading,⁴³ contributing to an increase in web queries on the topic and consumer concerns and confusion.⁴⁴

Short-term recommendations

- Monitor topic on social media and news to determine if action is needed.
- If interest in and coverage of the topic amplifies, expand messaging to include recommendations about how to prepare for vaccination appointments.

Appendix

Appendix A: Increasing Vaccination Model



Source: The BeSD expert working group. Based on: Brewer NT, Chapman GB, Rothman AJ, Leask J, and Kempe A (2017). Increasing vaccination: Putting psychological science into action. *Psychological Science for the Public Interest*. 18(3):149–207. <https://doi.org/10.1177/1529100618760521>

Appendix B: Report 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, Mondays	<ul style="list-style-type: none"> Hootsuite Muck Rack Sprout Social First Draft Stronger Native platform searches 	<ul style="list-style-type: none"> Trending topics Demographic and geographic conversation monitoring
Social Media Listening	CDC Channel COVID-19 Post metrics	Weekly, Wednesdays	<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 and Individual Review	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, Mondays	<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	Weekdays, daily	<ul style="list-style-type: none"> Various 	<ul style="list-style-type: none"> General 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/ COVID-19 vaccines 	<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/ COVID-19 vaccines 	<ul style="list-style-type: none"> Identify current vaccination intention Identify barriers to vaccination