COVID-19 State of Vaccine Confidence Insights Report

Report 27 | **August 10, 2022** | Date Range: April 5 – May 2, 2022

Summary

Major themes identified from social media, news, and other sources that may impact vaccine confidence:[a]

- Consumers continue to have questions and concerns about additional COVID-19 booster doses.
- Consumers continue to express their support or opposition to COVID-19 mitigation measures.

Continuing and evolving themes that may impact vaccine confidence:
- Consumers continue to have questions and express frustration with proof of vaccination requirements because of the belief that the vaccines are not safe or effective.
- While some consumers eagerly awaited emergency use authorization of COVID-19 vaccines in children less than 6 years of age, others are opposed to approving vaccines in this age range.[b]
- Consumers continue to have questions about the effectiveness of the COVID-19 vaccines against SARS-CoV-2 variants.
- Consumers continue to express their lack of trust in CDC.

Ways public health and partners can take action.

Federal, state, and local partners should continue to work together to explain the rationale for updated guidance, respond to gaps in information, and confront misinformation with evidence-based messaging. The goal of these efforts is to increase confidence in vaccines and increase vaccination with primary series and booster doses. Other ways to take action on the themes in this report include:
- Engage communities in a sustainable, equitable, and inclusive way using two-way communication to listen, build trust, and increase collaboration.
- Work with partners to create, disseminate and amplify messages explaining why vaccines are still important in the COVID-19 prevention response.
- Work with partners to create, disseminate and amplify messages about community-level risk and corresponding COVID-19 mitigation measures.
- Work with public health officials, healthcare workers, and community leaders to create, disseminate and amplify messages that stress the safety of COVID-19 booster doses over infection-induced immunity. Create visuals and plain-language documents showing the efficacy of COVID-19 vaccines.
- Work with trusted messengers to create, disseminate and amplify communication products that communicate scientific findings about adverse events to people who are unvaccinated with a focus on uncommon dissemination channels and innovative messaging.

For findings and ways to act from our other reports, see previous *Insights Reports.*

Resources: The following link contains social media resources such as graphics, language, and social media calendars that our partners can use to address the issues raised in this report: https://centersfordiseasecontrol.sharefile. com/d-s76fa27bf854a4e59b1dea93e1e3f1bf7

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[a]Themes for this report come from an integrated and thematic analysis of the data from the sources listed in the appendix.
[b]As of June 18, 2022, everyone 6 months and older is recommended to get a Moderna or Pfizer-BioNTech COVID-19 vaccine.

Contents

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 influencing COVID-19 vaccine hesitancy and uptake. These are characterized by the level and type of threat to vaccine confidence, the degree the respective theme appears in the data sources, and directionality (i.e., increasing, decreasing or stable). In addition, 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 improve 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 comprehensively cover all content related to the highlighted themes.

How do you classify this theme/information?			
High risk	**Moderate risk**	**Low risk**	**Positive sentiment**
• May lead to vaccine refusals and decreased uptake • Wide reach, pervasive	• Potential to trigger hesitancy to vaccination • Moderate reach, modest dissemination	• Concerning, but low risk to vaccine confidence • Limited reach, limited dissemination	• 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)?		
Increasing Information spreading rapidly	**Stable** Information remaining constant at prior level	**Decreasing** Information is not gaining further traction and there has been no indication of additional activity

Major themes identified from social media, news, and other sources that may impact vaccine confidence[a]

Consumers continue to have questions and concerns about 2nd COVID-19 booster doses.

As of June 18, 2022, everyone 6 months and older are recommended to get a COVID-19 vaccine. Currently, individuals 5 years and older can get a COVID-19 booster dose. Adults fifty years and older, people 12 years and older who are immunocompromised, and people who received two doses of Johnson & Johnson's Janssen vaccine are eligible for a 2nd booster dose.[1] In this reporting period, searches for "how long does second booster last" increased by 1,050 percent.[b] Many individuals are stressing the importance of individuals getting a COVID-19 booster dose as soon as they are eligible.[2,3] However, consumers are also resistant to an additional COVID-19 dose. Some believe a good vaccine wouldn't require additional doses, infection-induced immunity provides equal, if not more, protection,[4,5] and additional COVID-19 booster doses solely exist as a means for pharmaceutical companies to make money.[6,7] Going forward, public health experts hope to devise a long-term plan addressing the need for additional COVID-19 booster doses.[8,9,10]


If you haven't gotten a booster shot for the COVID vaccine, please do. Please. It really can save your life. One shot. That's it. That's the tweet. No snark. No word play. Just the truth. Please help spread the message.
8:23 PM · Apr 29, 2022 · Twitter Web App
8,378 Retweets   408 Quote Tweets   44K Likes

Mis-Perceptions, Concerns, and Threats to Vaccine Confidence
- Infection-induced immunity from SARS-CoV-2 provides more protection than a COVID-19 vaccine and, therefore, entirely negates the need for a vaccine.[11,12]
- The COVID-19 vaccines do not work because 2nd booster doses are needed to protect individuals from COVID-19.[13,14]
- 2nd booster doses are not necessary and exist solely for pharmaceutical companies to make money.[15,16]
- The need for continual booster doses is not an effective nor practical way to end the pandemic. Therefore, an action plan is needed to address a return to normalcy.[17,18]

Information voids and commonly asked questions from the public[c]
- Who is eligible for COVID-19 booster doses?[d]
  - Everyone ages 5 years and older can get one booster dose 5 months after completing their Pfizer-BioNTech COVID-19 vaccine primary series. A booster is recommended 5 months after a Moderna primary series for persons 18 years and older. A booster is recommended 2 months after receiving Johnson & Johnson's Janssen COVID-19 vaccine. You are eligible for a 2nd COVID-19 booster dose if you are
    - 50 years of age or older,
    - 12 years of age or older and are moderately or severely immunocompromised, or 18 years of age or older and got two doses of J&J/Janssen vaccine.[19]

Top fan
So vaccine efficacy wanes but natural immunity is life long.
Like   Reply   5w   Edited   826

- Which vaccine brand should individuals receive for their booster dose?[b]
  - Three COVID-19 vaccines are authorized or approved for use in the United States to prevent COVID-19. Pfizer-BioNTech or Moderna (COVID-19 mRNA vaccines) are preferred for the 1st booster. Only the mRNA vaccines are recommended for a 2nd booster.[20]
- Can immunocompromised individuals receive COVID-19 booster doses?[b]
  - Children ages 6 months and older who are moderately or severely immunocompromised should receive a primary series of 3 doses of Pfizer-BioNTech or Moderna COVID-19 vaccine. A Pfizer-BioNTech booster dose is now recommended for children 5 - 17 years who received the Pfizer-BioNTech primary series-including those who are immunocompromised Children 6 months – 17 years who are immunocompromised and received a 3-dose primary series with Moderna mRNA are not currently recommended to get a COVID-19 booster.[21]

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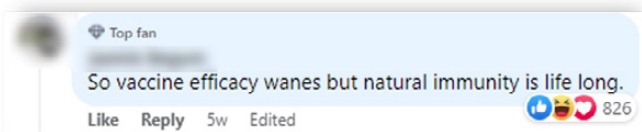
[a]Citations in this report are illustrative examples and are not the total number of instances of the corresponding themes.
[b]Google Trends
[c]These questions come from online data sources such as social media, news stories, Google Trends, and CDC-INFO
[d]CDC-INFO

- People ages 12-17 years who are moderately or severely immunocompromised and received Pfizer-BioNTech vaccine 3-dose primary series should receive a 4th dose (booster #1) at least 3 months after the primary series and a 5th dose (2nd booster) at least 4 months after the 1st booster. Immunocompromised children 12-17 years who had a 3-dose primary series with Moderna COVID-19 vaccine are not recommended to receive a booster at this time.[22]
  - People ages 18 years and older who are moderately or severely immunocompromised and received a 3-dose series with either Moderna or Pfizer-BioNTech vaccine should receive 2 booster doses of an mRNA vaccine.
  - People 18 years and older who had one dose of Johnson & Johnson's Janssen COVID-19 vaccine should get a dose of either mRNA COVID-19 vaccine (Pfizer-BioNTech or Moderna) at least 4 weeks after Janssen vaccination, then a second booster at least 2 months later. A 3rd booster (4th dose) with an mRNA vaccine is recommended at least 4 months later.[23]
  - For more information about the recommended COVID-19 vaccinations, refer to CDC's At-A-Glance COVID-19 Vaccination Schedules.
- Does infection-induced immunity provide more protection than a COVID-19 vaccine dose?b
  - COVID-19 vaccination causes a more predictable immune response than infection with the virus that causes COVID-19. Getting a COVID-19 vaccine gives most people a high level of protection against COVID-19 and can provide added protection for people who already had COVID-19. Getting a COVID-19 vaccination is a safer way to build protection than getting sick with COVID-19. COVID-19 vaccination helps protect you by creating an antibody response without you having to experience sickness. Getting vaccinated yourself may also protect people around you, particularly people at increased risk for severe illness from COVID-19. Getting sick with COVID-19 can cause severe illness or death, and we can't reliably predict who will have a mild or severe illness. If you get sick, you can spread COVID-19 to others. You can also continue to have long-term health issues after COVID-19 infection.[24]

Identified misinformation themes that may impact vaccine confidence
- Booster doses will cause a large number of serious adverse events or give people COVID-19.[25,26,27]
- COVID-19 vaccines weaken the body's immune system.[28,29]
- Booster doses cause vaccine-induced AIDS.[30,31]

Ways public health and partners can take action to improve vaccine confidence
- Engage communities in sustainable, equitable, and inclusive ways using two-way communication to listen, build trust, and increase collaboration.
- Work with leaders and trusted messengers in communities to develop strategies and messages about the efficacy and safety of COVID-19 vaccines that incorporate community values and priorities
- Work with public health officials, healthcare workers, and community leaders to stress the safety of COVID-19 booster doses over infection-induced immunity.
- Create visuals and plain-language documents that communicate the efficacy of the COVID-19 vaccines.
- Create and disseminate messages clearly describing who is eligible for 1st and 2nd COVID-19 vaccine booster doses.
- Develop a sound social media strategy to disseminate messages addressing themes that includes community partners.

Consumers continue to express their support or opposition to performing and following COVID-19 mitigation measures.

The US public continues to demonstrate pandemic fatigue and a desire to end the use of all mitigation measures. This coincides with some states relaxing their masking and vaccination requirements.[e],[32,33,34] A recent Axios-Ipsos poll found a similar lack of urgency, with only 9% of respondents describing COVID-19 as a crisis.[35] These concerns appeared to be amplified by two significant events during this reporting period. On April 18, 2022, a Florida federal judge struck down the national mask requirement for airplanes, airports and other public transportation, which the Department of Justice said they would appeal.[36,37] On Google Trends, searches related to the judge's ruling accounted for 6 of the top 10 most frequently searched queries related to masks.[f] On April 26, 2022, Dr. Fauci gave an interview where he stated that "we are certainly right now in this country out of the pandemic phase."[38] After the interview, Dr. Fauci clarified his statement by saying that the US was out of the "full-blown explosive pandemic phase." However, some social media users shared the original quote as evidence that COVID-19 was now endemic in the US and, because COVID-19 is endemic, it is no longer a threat.[39,40,41]

You can stop with the fear mongering, CDC. Lord Fauci himself stated that we are no longer in a "pandemic." He is, after all, a medical professional, no?

1w   10 likes   Reply
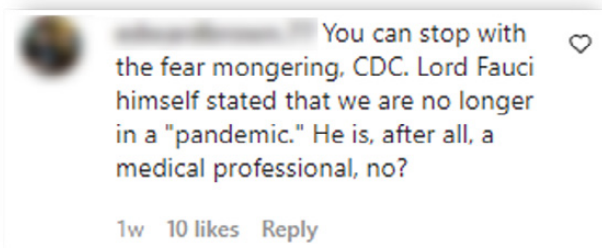
Public's Perceptions, Concerns, and Threats to Vaccine Confidence

- Many social media users continue to state that because the pandemic is over, the public can progress past pandemic mitigation measures.[42,43,44,45]
- A recent Reuters-Ipsos poll found that 44% of respondents said that Americans need to get back to normal and get on with their lives. This is an increase from 36% in February.[46]
- According to the same Reuters-Ipsos poll, 64% of respondents said cities and states should impose mask requirements for indoor public places if there is a resurgence of COVID-19 in their area.[47]
- An AP-NORC poll found that 56% of Americans support mask requirements for people traveling on planes and public transportation, compared to 24% who oppose masks on public transportation.[48]
- A KFF poll found that 59% of adults think people should continue to wear masks in public places to minimize the spread of COVID-19.[49]
- A recent Axios-Ipsos poll found that 50% of respondents still support schools requiring students, teachers, and staff to wear masks, although this is down from 70% at the start of the school year.[50]
- Patients and healthcare organizations express their frustration and confusion regarding masking guidance in healthcare settings.[51]

Replying to @CDCgov

Y'all are still playing Covid? This crap is over with already. Variants aren't a big deal. It's just another version of the flu.

7:14 PM · Apr 29, 2022 · Twitter Web App

Information voids and commonly asked questions from the public

- Is COVID-19 endemic in the U.S.?
  - While the virus that causes COVID-19 is now endemic, the continued evolution of the virus and continued health impact remains, although with much lower deaths and hospitalizations than earlier in the pandemic.   As of the writing of this report, since President Trump declared a nationwide emergency on March 15, 2020, the emergency declaration remains in effect.
- Why is it still recommended by CDC to wear masks on public transportation?
  - As a result of a court order, effective April 18, 2022, CDC's January 29, 2021 order requiring masks on public transportation conveyances and at transportation hubs was no longer in effect. However, CDC continues to recommend that people wear masks in indoor public transportation settings at this time.[52]
  - When people properly wear a well-fitting mask or respirator, they protect themselves and those around them, and help keep travel and public transportation safer for everyone. Wearing a well-fitting mask or respirator is most beneficial in crowded or poorly ventilated locations, such as airport jetways. This public health recommendation is based on the currently available data, including an understanding of domestic and global epidemiology, circulating variants and their impact on disease severity and vaccine effectiveness, current trends in COVID-19 Community Levels within the United States, and projections of COVID-19 trends in the coming months.[53]

- Should a used N95 mask be replaced with a cloth mask in healthcare settings?
  - Replace the N95 when the straps are stretched out and it no longer fits snugly against your face or when it becomes wet, dirty, or damaged.[54] Masks and respirators (i.e., specialized filtering masks such as "N95s") can provide different levels of protection depending on the type of mask and how they are used. Loosely woven cloth products provide the least protection, layered finely woven products offer more protection, well-fitting disposable surgical masks and KN95s offer even more protection, and well-fitting NIOSH-approved respirators (including N95s) offer the highest level of protection.[54]

Identified misinformation themes that may impact vaccine confidence

- CDC declared the pandemic over.[g]

Ways public health and partners can take action to improve vaccine confidence

- Develop and amplify messages explaining why vaccines are still important in the COVID-19 prevention response.
- Disseminate messages about community-level risk and corresponding COVID-19 mitigation measures.
- Support employers that have existing proof of vaccination requirements by providing or helping them craft messages about the importance of vaccination for their employees or offer onsite vaccinations.
- Support employers that do not have existing proof of vaccination by helping them implement COVID-19 preparedness, response, and control plans.
- Continue to encourage vaccinations and staying up to date with vaccine boosters by suggesting employers offer time off to get vaccines, or recover from side effects.

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[g]CDC-INFO

Continuing and evolving themes that may impact vaccine confidence

The themes below have been noted in previous reports and continue to undermine vaccine confidence. The information highlighted below focuses on what is new or different from previous reports. For additional context and previous recommendations on these themes, see previous *Insights Reports.*
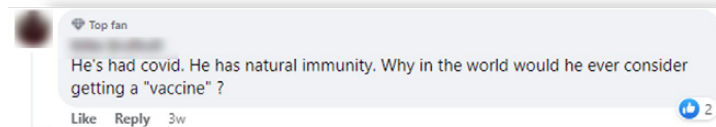
Parents continue to have questions and express frustration towards COVID-19 vaccination in children.

As of June 18, 2022, everyone 6 months and older are recommended to get a Moderna or Pfizer-BioNTech COVID-19 vaccine. On April 28, 2022, Moderna formally submitted data to the FDA to approve their COVID-19 vaccine in children aged younger than 6 years of age.[55] Likely in response to this announcement, searches for "moderna vaccine for kids under 5" rose by 250% compared to the previous reporting period.[h] Many parents were calling on the FDA to immediately schedule a meeting to review Moderna's childhood vaccination data[56,57] Additionally, Pfizer submitted data to the FDA to approve a booster dose for children 5-11 years of age.[58] Some parents were relieved and hopeful at the notion of being one step closer to childhood vaccination.[59,60] However, others were still frustrated with the process and that emergency use authorization had not been granted earlier for this age range.[61,62,63] Some individuals were pushing for off-label use of the COVID-19 vaccine to get kids under 5 years of age vaccinated.[64,65]

Other consumers continue to raise concern over side effects[66,67] believe vaccination is unnecessary in younger children,[70,71] and cite a lack of data to support childhood vaccination.[68,69] On June 18, 2022, CDC Director Rochelle Walensky endorsed the Advisory Committee on Immunization Practices' (ACIP) recommendation that all children 6 months through 5 years of age should receive a COVID-19 vaccine. This expands eligibility for vaccination to nearly 20 million additional children and means that all Americans ages 6 months and older are now eligible for vaccination.[72]

Perceptions, Concerns, and Threats to Vaccine Confidence
- Many parents are hesitant to vaccinate their children due to a fear of serious side effects and adverse events.[73,74]
- Some people question the need for the COVID-19 vaccine if a person recovered from COVID-19.[75,76]
- Consumers believe the FDA was not moving as fast as it should to approve COVID-19 vaccines in children.[77,78]
- While some parents are against childhood immunization, others remain advocates for COVID-19 vaccines in children.[79,80]
- Low vaccine confidence and uptake have already led to low vaccination levels in children.[81,82]

> 🏆 Top fan
>
> He's had covid. He has natural immunity. Why in the world would he ever consider getting a "vaccine" ?
>
> Like   Reply   3w   👍 2

Information voids and commonly asked questions from the public
- When will COVID-19 vaccines for children under the age of 5 be available?
  - As of June 18, 2022, everyone 6 months and older is recommended to get a Moderna or Pfizer-BioNTech COVID-19 vaccine.[83]
- What are the vaccines approved for use in children?
  - CDC recommends the Moderna and Pfizer-BioNTech COVID-19 vaccines for everyone 6 months and older. Use CDC's COVID-19 booster tool to learn if and when your child or teen can get boosters to stay up to date with their COVID-19 vaccines.[84]
- What are common COVID-19 vaccine side effects in children?
  - Review of vaccine safety data for children find that side effects most commonly reported after getting vaccinated with the Pfizer-BioNTech COVID-19 vaccine were mild and brief. These side effects were more common after the 2nd dose and included headache, pain in the arm where the shot was given, and tiredness.[85] Younger children may experience fewer side effects after COVID-19 vaccination than teens or young adults. For children and teens ages 12 through 17 years, the most commonly reported side effects after getting the 1st two doses of the Pfizer-BioNTech COVID-19 vaccine are tiredness, fever, headache, and pain in the arm where the shot was given.[86]
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[h]Google Trends

For children 4 years and older, side effects are more common after the second dose and can include:[87]
- » Pain, swelling, and redness in the arm where the shot was given
- » Fever
- » Tiredness
- » Headache
- » Chills
- » Muscle or joint pain
- » Swollen lymph nodes

For children 3 years and younger, common side effects can include:
- » Pain where the shot was given
- » Swollen lymph nodes
- » Irritability or crying
- » Sleepiness
- » Loss of appetite

Identified misinformation themes that may impact vaccine confidence:
- Children have a high risk of death from receiving the COVID-19 vaccines.[88,89]
- COVID-19 poses no risk to children.[90,91]
- Children are getting hepatitis from the COVID-19 vaccines.[92]

Why would anyone subject their child to an experimental vaccine for a disease which poses zero threat to the child? This should be illegal. Parents and health officials should be prosecuted.

3w 5 likes Reply

Ways public health and partners can take action to improve vaccine confidence
- Collaborate with pediatricians and community leaders to create and disseminate information about the safety and need for COVID-19 vaccination in children 6 months and older.
- Share recommendations for the use of COVID-19 vaccines in children 6 months and older.
- Create and disseminate messages with trusted messengers that reassure parents that the safety of COVID-19 vaccination in children will continue to be monitored and encourage enrollment of children in v-safe.
- Create and disseminate messages with trusted messengers that accurately describe the side effects and risk of side effects COVID-19 vaccination in children.
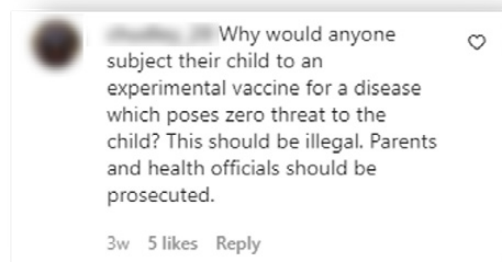
Consumers continue to have questions about the effectiveness of the COVID-19 vaccines against SARS-CoV-2 variants.

As COVID-19 cases rise nationally,[93,94,95] drug companies are thinking of different methods to combat symptomatic infection.[96] Scientists believe nasal spray vaccines could help combat future variants by providing a higher level of protection.[97] Additionally, during this reporting period, Moderna announced the company is developing a bivalent vaccine,[98] one that contains spike proteins of both the ancestral and more recent strains of SARS-CoV-2 virus.[99] The bivalent vaccine produced a better immune response in trials against several SARS-CoV-2 variants, including Omicron and Delta.[100] On June 22, 2022, Moderna announced their bivalent MRNA booster dose was effective at neutralizing antibody response against omicron subvariants BA.4 and BA.5.[101] Many news reports are also highlighting the presence of several variants and addressing questions about COVID-19 cases caused by Omicron variants, such as BA.4 and BA.5.[102,103] And, despite the BA.2 variant's earlier pervasiveness, few unvaccinated or unboosted adults who were aware of the BA.2 variant during its peak reported that it would influence their decision to get vaccinated or boosted.[104]

The committee kept saying they believe a multivariant vaccine may be the best approach. That is like holding a glass of wine in your hand and saying if only I had a glass of wine. Novavax offers multivariant protection and is on their desk waiting for approval.

9:49 PM · Apr 6, 2022 · Twitter Web App

Perceptions, Concerns, and Threats to Vaccine Confidence

- Consumers believe an updated vaccine is necessary to properly protect against SARS-CoV-2 variants.[105]
- Public health officials are still pushing for COVID-19 vaccination even though the vaccines were developed for protection against the ancestral strain of the virus.[106]
- Updated vaccines are necessary to protect against new variants.[107]

Information voids and commonly asked questions from the public

- How does CDC identify and track SARS-CoV-2 variants?
  - To identify and track SARS-CoV-2 variants, CDC uses genomic surveillance. CDC's national genomic surveillance system collects SARS-CoV-2 specimens for sequencing through the National SARS-CoV-2 Strain Surveillance (NS3) program, as well as SARS-CoV-2 sequences generated by commercial or academic laboratories contracted by CDC and state or local public health laboratories. Virus genetic sequences are analyzed and classified as a particular variant. The proportion of variants in a population are calculated nationally, by HHS region, and by jurisdiction. The thousands of sequences analyzed every week through CDC's national genomic sequencing and bioinformatics efforts fuel the comprehensive and population-based US surveillance system established to identify and monitor the spread of variants.[108]
- Will booster doses be effective against SARS-CoV-2 variants?
  - Breakthrough infections in people who are vaccinated are expected, but being up to date on recommended vaccines is effective at preventing severe illness, hospitalizations, and death. The emergence of the variants further emphasizes the importance of being up to date on COVID-19 vaccination.[109]
- Can all adults receive a 2nd booster dose to protect against SARS-CoV-2 variants?
  - No. Right now, adults 50 years of age or older are eligible for a 2nd COVID-19 booster dose if they received a 1st booster dose at least 4 months ago. Others 12 years of age or older are eligible for a 2nd booster dose if they are moderately or severely immunocompromised and received a 1st booster dose at least 4 months ago.[110]

Identified misinformation themes that may impact vaccine confidence

- The COVID-19 vaccine is useless because it does not protect against SARS-CoV-2 variants.[111]
- The new variants are a political tactic to incite fear and raise support for certain candidates.[112,113,114]

Ways public health and partners can take action to improve vaccine confidence

- Work with trusted messengers to communicate scientific findings of side effects and adverse events to people who are unvaccinated with a focus on using uncommon dissemination channels and innovative messaging.
- Continue to monitor the spread of SARS-CoV-2 variants and make such data publicly available.
- Monitor and update the public on the COVID-19 vaccine's effectiveness against variants and communicate any concerns in real-time.
- Create messages that encourage people who are vaccinated to support their friends and family to get the COVID-19 vaccines.

Consumers continue to question the benefits of getting a booster dose following vaccine breakthrough infections in high-profile people.

Notable breakthrough infections,[115,116] for example, the April 26th announcement of VP Kamala Harris' positive COVID-19 test result after having received a 2nd booster dose,[117,118,119] have sustained consumer discussion about the benefit of additional booster doses. Recent studies demonstrate that the COVID-19 vaccines continue to provide protection against severe illness, hospitalization, and death.[120] However, some consumers express doubt about the benefit of vaccinations and booster doses given the presence of breakthrough infections.[121,122,123] Increased doubt in vaccine effectiveness can decrease vaccine confidence and uptake, including decreased booster dose uptake.

DAILY NEWS

More politicians test positive for COVID-19 as virus spreads among DC power players

Perceptions, Concerns, and Threats to Vaccine Confidence
- Some consumers worry that the CDC is not disseminating data related to breakthrough infections.[124,125,126]
- Vaccinated individuals who experienced breakthrough infections may be less likely to receive future COVID-19 booster doses.[127]

Information voids and commonly asked questions from the public
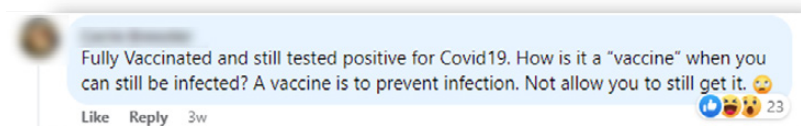- Does being up to date on COVID-19 vaccines reduce your likelihood of SARS-CoV-2 infection?
  - Recent data suggests that unvaccinated people aged 12 and older had a 2-3x higher risk of testing positive for SARS-Cov-2 infection compared to people vaccinated with a primary series and a booster dose.[128]
- Why should you get a COVID-19 vaccine if you can still get a SARS-CoV-2 infection and spread it to others?
  - Fully vaccinated people with a vaccine breakthrough infection are less likely to develop serious illness than those who are unvaccinated and get COVID-19. Even when fully vaccinated people develop symptoms, they tend to be less severe than in unvaccinated people.[129]

Identified misinformation themes that may impact vaccine confidence
- COVID-19 vaccines are ineffective and should not be classified as vaccines.[130,131,132,133]

Ways public health and partners can take action to improve vaccine confidence
- Continue to disseminate and amplify messages that demonstrate why vaccines are still an important tool to protect against severe COVID-19 infection, hospitalization, or death.
- Work with community members and trusted messengers to create and disseminate messages that educate the public about breakthrough cases and how they are expected due to the high transmissibility of the circulating variants.

> Fully Vaccinated and still tested positive for Covid19. How is it a "vaccine" when you can still be infected? A vaccine is to prevent infection. Not allow you to still get it. 🙄
>
> Like   Reply   3w   23

Consumers continue to express their lack of trust in CDC.

As reported in SoVC 25, news outlets reported consumers' lack of trust in public health, science, and CDC,[134],[135] following a news story about CDC withholding COVID-19 data.[136] Social media users continue to express a lack of trust in CDC, including misgivings about CDC's data and related dissemination.[137],[138],[139] Consumers express frustration regarding CDC's Community Levels data, arguing that the February 25 change in metric from Transmission Levels to Community Levels was poorly communicated and misleading.[i],[140],[141] Some social media users also pushed back on CDC's vaccine outreach to Tribal populations as a targeted effort to mislead American Indians and Alaskan Natives.[142],[143],[144]
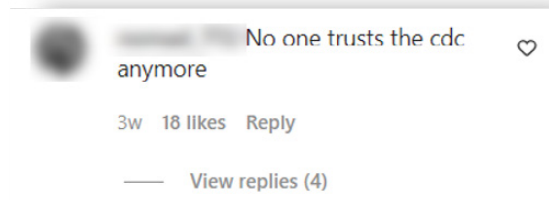
Additionally, consumers question the accuracy of CDC data across a wide range of domains, including COVID-19 deaths,[h] vaccination rates,[145] and vaccine-induced adverse events.[146] Consumers continue to discuss inventories of reported adverse events such as the Vaccine Adverse Event Reporting System (VAERS) and Pfizer's Cumulative Analysis of Post-Authorization Adverse Event Reports of Pf-07302048 (Bnt162b2) Received Through 28-Feb-2021 document as evidence of CDC ignoring or suppressing adverse event information.[147],[148],[149]

Lack of trust in the CDC's data and messaging regarding COVID-19 may contribute to decreased vaccine confidence and uptake, while wider mistrust in CDC and public health agencies may hamper public health efforts unrelated to COVID-19.

Perceptions, Concerns, and Threats to Vaccine Confidence

- Some consumers worry that the COVID-19 community levels map is misleading and will lead to reduced use of mitigation measures.[150],[151]

- Some consumers worry that the CDC introduced the COVID-19 community levels map to prioritize the economy over public health.[152]
- Some consumers believe the CDC is suppressing or ignoring VAERS data.[153]
- Some consumers believe the CDC attempted to suppress a recently released Pfizer document, or is ignoring the data it contains.[154],[155]
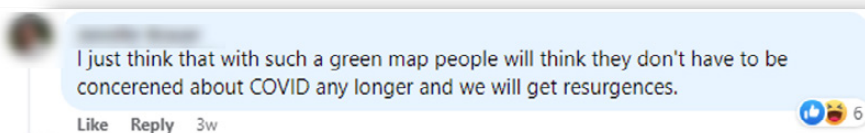
Information voids and commonly asked questions from the public

- Why did the CDC introduce the COVID-19 community levels? Where did the community transmission information go?
  - The CDC provides COVID-19 community levels data as a tool to provide current, local information for decision-making around community prevention strategies and individual behaviors. It can be used to prevent COVID-19 from placing strain on communities and healthcare systems.[156]
  - You can find more information and your county's COVID-19 community level by going to CDC's COVID-19 Community Levels website.
  - Community transmission information is still actively updated and is provided for healthcare facility use at CDC's Integrated County View website.
- Are the adverse events reported in VAERS or the recently released Pfizer document proof that COVID-19 vaccines are not safe?
  - No. Multiple analyses from CDC and others have found all approved or authorized COVID-19 vaccines to be safe, with rare serious adverse events identified and publicly reported. You may find more information by going to: Ensuring COVID-19 Vaccine Safety in the US | CDC
  - VAERS is an early warning system that accepts and analyzes reports of possible health problems—also called "adverse events"—after vaccination. Anybody can submit a report to VAERS; VAERS data is publicly available. VAERS data contains all submitted reports of health problems individuals experience following vaccination, and this data alone cannot be used to determine if the vaccine caused the adverse event(s) reported. Additional information can be found at CDC's Vaccine Adverse Event Reporting System (VAERS) website.

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[i]CDC-INFO

- The Pfizer document is a comprehensive listing of all reported adverse events or health issues described following vaccination, regardless of whether the vaccine caused them. Tracking such events is a requirement for pharmaceutical companies, FDA, and CDC to identify possible safety signals, particularly rare events that may not have been possible to detect during clinical trials. An adverse event is simply an event that has occurred after vaccination — it does not mean the vaccine caused the problem. And many of these events are likely to be purely coincidental. Adverse events related to the Pfizer-BioNTech vaccine are similar to many routine vaccines. These adverse events are mild and short lasting. Importantly, for severe adverse events, there is a detailed process to determine whether these are related to vaccination or not. FDA and CDC use several different sources of data to monitor vaccine safety closely and identify events that occur more often after vaccination compared to how often they typically occur in the general population.[157] The Pfizer report did not include any comparison of adverse events in unvaccinated people.

Identified misinformation themes that may impact vaccine confidence
- The CDC is lying and spreading misinformation.[158,159,160]
- The CDC cannot be trusted due to undue influence of pharmaceutical companies and/or political entities.[161,162,163,164]
- The CDC is hiding information about a link between COVID-19 vaccination and a cluster of children identified with hepatitis and adenovirus infection. [j,165,166]
- CDC and the federal government conspired to put snake venom in the water supply, remdesivir, or the mRNA COVID-19 vaccines to create or exacerbate the COVID-19 pandemic.[167,168]
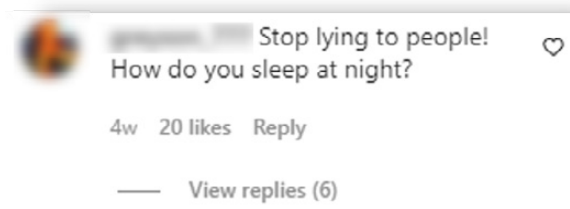
Ways public health and partners can take action to improve vaccine confidence
- Engage communities in a sustainable, equitable, and inclusive way using two-way communication to listen, build trust, and increase collaboration.
- Coordinate with federal, state, local agencies and partners to share clear, complete, and accurate messages about COVID-19 vaccines and take visible actions to build trust in the vaccine, the vaccinator, and the system.
- Communicate transparently about the process for authorizing, approving, making recommendations for, monitoring the safety of, distributing, allocating, and administering COVID-19 vaccines, including data collection, analysis, and reporting.
- Provide regular updates on the benefits, safety, side effects, and effectiveness of COVID-19 vaccines and clearly communicate what is known, what isn't known, and what is being done to find out what isn't known.
- Proactively address and help stop the spread and harm of misinformation via social media platforms, partners, and trusted messengers.

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[j]CDC-INFO

Appendix: Inputs and Sources

Type	Input	Cadence	Sources	Tactics for Utilization
Social Media Listening & Media Monitoring	Communication Surveillance Report	Daily on weekdays	• Google news • Meltwater • CrowdTangle • Native platform searches	• Share of voice topic analysis to identify themes • Emerging topics
	Meltwater	Daily	• Facebook, Twitter, Instagram • Blogs • News media • Online forums	• Share of voice topic analysis • Emerging theme topics • Identify high reach/velocity topics
	OADC (Office of the Associate Director of Communication) Channel COVID-19 Post metrics	Weekly	• Sprout Social • Native OADC account analytics	• Analyze # of posts, topics • Success of messages, # of impressions, reach, # engagements
	OADC Channel Comment Analysis	Daily on weekdays	• Native platform searches	• Sentiment analysis • Identify message gaps/voids
Direct Reports	CDC-INFO Metrics	Weekly	• CDC-INFO inquiry line list • Prepared response (PR) usage report	• Cross-compare PR usage with inquiry theme analysis • Sentiment analysis • Identify information gaps/voids
	VTF Media Requests	Weekly	• Media request line list	• Leading indicator for news coverage • Identify information gaps/voids
	Web Metrics	Weekly	• Top pages • Google search queries • Top FAQs • Referring domains	• Identify information gaps/voids, • Identify keywords/search terms, changes in web traffic
Research	Poll Review	Weekly	• Harris Poll, PEW research, Gallup Poll, KFF • New data related to vaccine hesitancy	• Identify socio-behavior indicators related to motivation and intention to vaccinate
	Literature Review	Weekly	• PubMed, LitCovid, ProQuest Central, Altmetric • New data related to vaccine hesitancy	• Identify current vaccination intention • Identify barriers to vaccination
Third Party Reports	Tanaq Social Listening +Media Monitoring Report	Weekly	• Meltwater • Sprout Social • First Draft • Native platform searches	• Trending topics • Demographic and geographic conversation monitoring
	CrowdTangle content insights report	Biweekly	• Facebook	• Top pages (voices), groups • General trends/sentiment analysis • News analysis through posts
	Washington St. Louis iHeard	Weekly	• Proprietary methods	• Survey results • Emerging threats and data deficits • Vaccine narratives
	Project VCTR	Weekly	• Proprietary methods	• National and regional trends in negative attitudes toward vaccination • Conversations around Legislation