Consumers continued to have concerns about the effectiveness and safety of COVID-19 vaccines for children.

This report is a consolidation of findings related to COVID-19 vaccines for children from CDC's COVID-19 State of Vaccine Confidence Report (SoVC) #20, SoVC #21, and SoVC #22 reflecting data collected from November 9, 2021, through January 10, 2022. During these data collection periods, the Insights Unit has seen a steadily increasing amount of data related to the effectiveness and safety of COVID-19 vaccines for children through all of our data sources, including social media, news stories, third-party reports, and Google search trends. The Insights Unit has classified “concerns about the effectiveness and safety of COVID-19 vaccines for children” as having a high risk of impacting vaccine confidence and is increasing in frequency across the reporting periods.

Overview

Since the U.S. Food and Drug Administration (FDA) authorized the Pfizer-BioNTech COVID-19 vaccine for emergency use in children ages 5 through 11 years on October 29, 2021,1 parents on social media and other social media users have been concerned about adverse events and unknown long-term side effects of the vaccine, citing incomplete and rushed trials as the cause of their apprehension.2,3,4 A perceived higher risk of adverse events relative to benefits of vaccination or lack of concern about the severity of COVID-19 in this age group can impact vaccine confidence as justification for not having children vaccinated. Some of these concerns may have been made worse by reports that vaccine clinics across the country accidentally administered the higher adult dosage, rather than the pediatric dosage, to children ages 5-11 years.5

Perceptions, Concerns, and Threat to Vaccine Confidence

- Social media users and questions to CDC-INFO expressed apprehension about the safety, effectiveness, and possible side effects of the COVID-19 vaccine in children, including but not limited to heart issues (myocarditis), death, and unknown long-term side effects.6,7
- Consumers expressed the belief that children do not need to be vaccinated due to having milder symptoms, stronger immunity, and fewer deaths.8,9,10
- Social media users continue to cite concern about serious side effects and unknown long-term outcomes, like fertility and heart problems.11,12,13,14
- Many consumers suggest authorization of vaccines for children should wait until long-term studies have been completed.15,16
- Studies show a rural-urban vaccination gap, with pediatricians in rural areas less likely than pediatricians in urban areas to recommend COVID-19 vaccinations for children.17

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*aCDC-INFO
Content Gaps and Information Voids

- Why is the COVID-19 vaccine necessary for children ages 18 years and younger if they only experience mild symptoms?
  - Children infected with SARS-CoV-2, the virus that causes COVID-19, can develop serious health complications. Babies ages 1 year and younger and children with certain underlying medical conditions may be more likely to have serious illness from COVID-19. Some children have developed a rare but serious disease that is linked to COVID-19 called multisystem inflammatory syndrome (MIS-C). COVID-19 illness results in loss of in-person learning and impacts other opportunities for children to learn and socialize, and children can spread the illness to others, including those who are immunocompromised or who could otherwise have a severe illness.

- Why is there a lack of data on the long-term side effects and adverse events of COVID-19 vaccines in children?
  - Serious side effects that could cause a long-term health problem are extremely unusual following any vaccination, including COVID-19 vaccination. In rare cases, people have experienced serious health events after COVID-19 vaccination. Serious adverse events after COVID-19 vaccination are rare but may occur. Rare cases of myocarditis have been reported after vaccination, but most cases are mild and most patients recover. Vaccine safety monitoring is ongoing for all vaccines, including COVID-19 vaccines.

- When will vaccines be authorized or approved for children ages 4 years and younger?
  - Currently, children ages 4 years and younger are not eligible for a COVID-19 vaccine in the United States; however, clinical trials are underway. The best way currently to protect children ages 4 years and younger is to vaccinate everyone ages 5 years and older who are around them and to follow other CDC guidance for preventing COVID-19 transmission, including masking. The FDA postponed the Vaccines and Related Biological Products Advisory Committee (VRBPAC) meeting originally scheduled for February 15, 2021, to give the agency time to consider additional data, allowing for a transparent public discussion as part of their usual scientific and regulatory processes for COVID-19 vaccines. FDA will provide an update on timing for the advisory committee meeting once additional data is received on a third dose in this age group from the company’s ongoing clinical trial and have an opportunity to complete an updated evaluation.

- What vaccine injection site reactions and serious side effects should parents and caregivers be aware of and when should they seek medical care for reactions after vaccination?
  - CDC has an online resource that details common side effects and provides information as to when a parent should seek medical care for adverse reactions after vaccination.

- What should a healthcare professional do if the wrong dose of the COVID-19 vaccine was administered to a child?
  - Providers, patients, and parents should report vaccine administration errors to the Vaccine Adverse Event Reporting System. To know what to do regarding formulation and dosage errors, providers should refer to CDC’s COVID-19 Vaccine Administration Errors and Deviations document.

Misinformation Themes

- Children do not need the COVID-19 vaccine because they are at low risk of death.
- The risk of adverse events from COVID-19 vaccination are more severe than the potential impact of COVID-19 illness.
- Deaths are more likely to occur from the COVID-19 vaccine than from infection with the virus that causes COVID-19.
- Pediatric vaccination is an experiment on children who are not at risk for COVID-19.
- COVID-19 vaccines are killing, permanently damaging, or disabling children.
- Pharmaceutical companies will not release the final safety data on COVID-19 vaccines for children for several decades.

Ways to Take Action

- Encourage parents, caregivers, and pediatric healthcare providers to engage in conversations that address vaccine safety concerns by discussing potential side effects, vaccine benefits, and low rates of adverse events.
- Develop and disseminate messages and talking points for pediatric healthcare providers to assist them in their conversations with parents and caregivers.
- Utilize and promote motivators to vaccinate children, such as protection of family members not yet eligible for vaccines and the ability to continue in-person school learning and activities, including games and sports.
- Develop plain language messages using findings from these three recent MMWR reports to educate people on the safety of the vaccine for children and the risk of severe COVID-19 illness in children:
  - Trends in COVID-19 Cases, Emergency Department Visits, and Hospital Admissions Among Children and Adolescents Aged 0–17 Years — United States, August 2020–August 2021
## Appendix: Inputs and Sources

<table>
<thead>
<tr>
<th>Type</th>
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| **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**             | Tanag 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  
• Media trends analysis  
• Emerging threats and data deficits  
• Online vaccine narratives |
| First Draft News Vaccine Misinformation Insights Report | Monthly                                                            |               | • Proprietary methods | • National and regional trends in negative attitudes toward vaccination  
• Conversations around Legislation |
| Project VCTR                         | Weekly                                                               |               | • Proprietary methods | • Mis- and disinformation trends related to COVID-19 vaccine |
| Virality Project                    | Weekly                                                               |               | • Proprietary methods |                                                                 |