

# COVID-19 State of Vaccine Confidence Insights Report

Report 14 | September 13, 2021 | Date Range: August 17 – 30, 2021



## Summary

**Findings.** The announcement of the Food and Drug Administration's first full approval of a COVID-19 vaccine, Pfizer-BioNTech vaccine/Comirnaty, drove conversations in the news and on social media about the future of vaccine mandates. Consumers remain divided over whether vaccine mandates should be implemented and if natural immunity should be considered. Conversations online about the use of ivermectin to treat and prevent COVID-19 entered public consciousness with many consumers looking for more information online about whether the medication would work and how to get it. Some consumers claimed that ivermectin was safer and more effective than available vaccines. Several consumers, both for and against ivermectin, also felt that ivermectin use and promotion by other consumers and vocal vaccine deniers was a manifestation of the lack of trust in the United States government in handling the COVID-19 pandemic. Lastly, consumer interest in vaccinating children under 12 years old increased as students prepared or returned to school in August. Parents expressed confusion about the risk of COVID-19 to their children and were divided about whether to vaccinate their child or adolescent.

**Ways to 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 COVID-19 vaccines and expand vaccine uptake more broadly. Messages leveraging available safety and effectiveness data should be tailored for a variety of demographics and disseminated by partnering with trusted messengers and healthcare personnel to further amplify these messages. Research should be supported to better understand the impact of authorized or approved treatments of vaccination intent and the motivation and interest in vaccination among adolescents and children.



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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 influencing COVID-19 vaccine hesitancy and uptake. These are characterized by the level and type of threat to vaccine confidence, degree of spread, and directionality. 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.

## Theme Classification

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

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

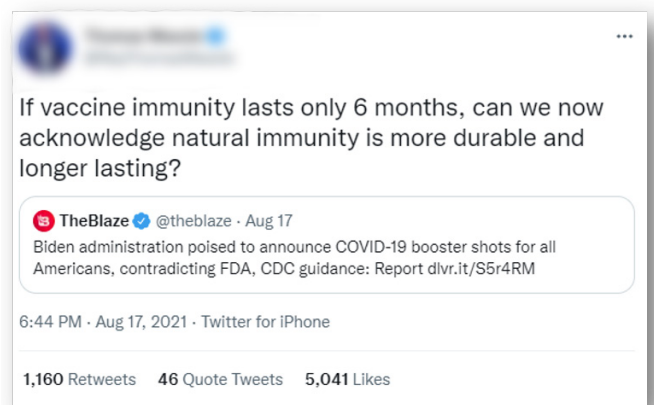
## Major Themes



### Consumers faced layered misinformation aimed at discrediting the safety and effectiveness of the newly approved Pfizer-BioNTech COVID-19 Vaccine (Comirnaty).

On August 23, 2021, the Food and Drug Administration (FDA) announced the first approval of a COVID-19 vaccine, Pfizer-BioNTech COVID-19 vaccine (Comirnaty). A recent survey<sup>1</sup> reported that 31% of people who are unvaccinated would be more likely to get a COVID-19 vaccine after FDA approval. Another poll found that FDA approval increased vaccine confidence in 80% of respondents.<sup>2</sup> Some local news outlets and surveys reported no change in the number of people getting vaccinated after the announcement of the approval,<sup>3</sup> while others are reporting an increase.<sup>4,5,6</sup>

Some social media users warned that FDA approval would lead to more vaccine mandates.<sup>7,8,9</sup> Some organizations began to implement vaccine mandates after the announcement.<sup>10,11</sup> According to multiple recent polls, consumers remain divided over whether an employer should impose vaccination requirements or whether they should charge higher insurance premiums for unvaccinated employees.<sup>12,13,14</sup> Additionally, these polls found a large difference in responses by the vaccination status of the respondent. Some consumers continued to promote the idea that mandates are not warranted because the vaccines are ineffective.<sup>15,16,17</sup> They also sought more information about vaccination requirements, mandates, and exemptions throughout the reporting period.<sup>a</sup> Unions and other worker advocacy groups demanded the right to negotiate vaccine mandates through collective bargaining, while some have or plan to file lawsuits and labor complaints against state governments and schools to nullify employer vaccine mandates.<sup>18,19,20,21</sup> Some employee advocacy groups and vocal vaccine deniers expressed concern that vaccine mandates would result in people getting fired or quitting their jobs.<sup>22,23</sup> One survey of long-term care employees found that more than half of unvaccinated home workers plan to find a job with no vaccine requirement.<sup>24,25</sup> Some consumers expressed interest in vaccine mandates, or the lack of such mandates, for government agencies and pharmaceutical companies.<sup>26,27,28,29,30,31,32,33</sup> Several consumers inquired about the Centers for Disease Control (CDC) and Prevention employees' vaccine mandates.<sup>b,c</sup>



Approval of the Pfizer-BioNTech vaccine also appeared to renew the discussion of natural immunity's role in preventing death and severe COVID-19. Consumers actively sought out information on natural immunity and if natural immunity provides more protection than vaccine-mediated immunity.<sup>a,b,c</sup> Vocal vaccine deniers and some consumers claimed natural immunity provides superior protection than the protection provided by COVID-19 vaccines.<sup>34,35,36,37,38,39,40,41</sup> Several news outlets shared early data from a preprint study that presented evidence that natural immunity provides superior protection compared to the protection provided by vaccines, and some social media users used this to support the claim that natural immunity is better.<sup>d,42,43,44,45,46,47,48</sup>

<sup>a</sup>Google Trends

<sup>b</sup>CDC-INFO

<sup>c</sup>SEMrush

<sup>d</sup>Google Trends

Multiple misinformation themes emerged in wake of the approval of the Pfizer-BioNTech vaccine:

- Comirnaty, which is the vaccine’s tradename, is different from the Pfizer-BioNTech COVID-19 Vaccine administered under emergency use authorization (EUA).<sup>49,50,51</sup>
- FDA did not grant full approval, but, rather, just extended the EUA.<sup>52,53,54</sup>
- Research eventually determined that many other previously FDA-approved medical products and pharmaceuticals have long-term side effects.<sup>55,56,57,58</sup>
- The approval of the Pfizer-BioNTech vaccine did not follow standard procedures.<sup>59,60,61,62,63</sup>
- The experimental study for the Pfizer-BioNTech vaccine will continue until 2023, so FDA’s full approval should not have happened.<sup>d,64,65,66</sup>

Some consumers also continued to express concern about the lack of long-term safety data despite FDA’s approval.<sup>67,68,69</sup>

**Ways to act:**

- Create messaging that communicates what is known about the vaccines with empathy, displays humility about the unknowns of the vaccine, and frames vaccines as part of a broader pandemic response.<sup>70</sup>
- Engage trusted community partners and develop innovative approaches to share messages.
- Disseminate messages that clarify that the Pfizer-BioNTech COVID-19 Vaccine and Comirnaty are the same.
- Continue to share information with the public about the effectiveness and safety of COVID-19 vaccines, including potential booster doses, in contrast to the dangers of acquiring natural immunity.
- Support research that investigates the differences between natural immunity and vaccine-mediated immunity in protecting people from COVID-19.

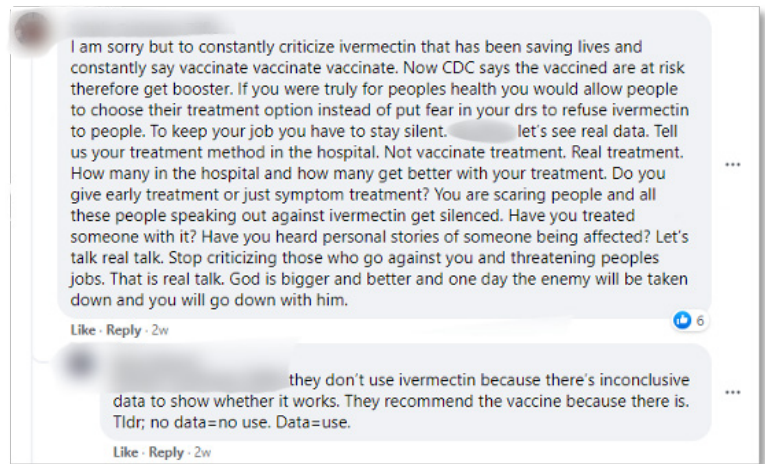




## Some consumers believe ivermectin is safer and more effective than COVID-19 vaccines.

News coverage of healthcare providers prescribing ivermectin or consumers seeking it through veterinary supply stores for the prevention and treatment of COVID-19 increased in the last two weeks of August 2021.<sup>e,71,72,73</sup> News outlets also amplified stories of vocal vaccine deniers who died of COVID-19 even though they promoted the use of ivermectin,<sup>74</sup> increased calls to poison control centers for ivermectin misuse,<sup>75</sup> and information about the types of adverse outcomes from improper ivermectin use.<sup>76</sup> However, some consumers continued to promote the benefits of ivermectin in treating COVID-19<sup>77,78,79</sup> despite this news and warnings from FDA<sup>80,81</sup> and other health officials.<sup>82,83</sup> With the digital environment cluttered with information promoting and discouraging the use of ivermectin to treat COVID-19, consumers searched for more information online.<sup>f</sup> Some news outlets attempted to answer some of the most common questions about what ivermectin is, why people claim it is a potential treatment, and how safe it is.<sup>84,85</sup> However, available digital content from health authorities was limited.<sup>9</sup>

Some consumers went as far as to claim ivermectin is safer and more effective than COVID-19 vaccines.<sup>86,87,88</sup> Some cited that ivermectin is an FDA-approved medication,<sup>89,90,91</sup> unlike current COVID-19 vaccines, which were only authorized until August 23, 2021, when FDA approved the Pfizer-BioNTech vaccine.<sup>92</sup> Some consumers also claimed that ivermectin was responsible for reducing the severity and spread of the Delta variant in other countries<sup>93,94</sup> with pointing to a misrepresentation of the [World Health Organization's \(WHO\) guidance](#) for ivermectin use for COVID-19 treatment.<sup>95</sup> Some politicians claimed the government was suppressing ivermectin use in order to promote vaccination,<sup>96</sup> while some healthcare providers continued to prescribe ivermectin to treat patients with COVID-19.<sup>97,98,99</sup>



Many consumers, both for and against ivermectin use, felt that the lack of trust in the U.S. government, FDA and CDC<sup>100,101,102,103</sup> drove use of ivermectin. News outlets and some public health experts expressed their feelings that ivermectin, which is being studied as a treatment for COVID-19, has been “radicalized” by vocal vaccine deniers and people who refuse vaccines.<sup>104,105,106</sup> Several also blamed social media companies for the continued spread of misinformation around ivermectin without adequate mitigation measures being implemented to reduce harm.<sup>107,108</sup>

### Ways to act:

- Expand available content about approved, authorized, and recommended treatments for COVID-19. Clarify what ivermectin is, what it is currently approved to treat, and how we are learning more about its potential role in treating patients with COVID-19. Disseminate messages encouraging people concerned about getting COVID-19 or wanting to treat COVID-19 at home to discuss treatment options with their healthcare provider. Disseminate messages about the risk of taking medications that are not approved or authorized for human use.
- Amplify messages about the safety and effectiveness of COVID-19 vaccines in preventing severe illness, hospitalization, and death. Highlight the number of vaccines safely given in the United States and how the U.S. vaccination system continues to monitor the vaccines to ensure they are safe and effective.
- Encourage healthcare providers to talk with their patients about the benefits of COVID-19 vaccination, such as preventing the need for experimental treatment options and hospitalization. Provide healthcare providers with talking points about ivermectin.
- Support research to better understand the impact that available, approved treatments have on motivation and intention for people to receive a primary series of COVID-19 vaccines.

<sup>e</sup>Meltwater

<sup>f</sup>GoogleTrends

<sup>g</sup>SEMRush



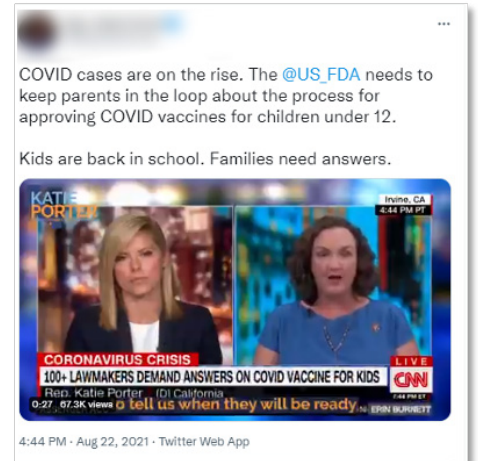
## Emerging Themes



### Some parents are desperate to vaccinate children under 12 years old, while others question the need.

Consumer interest about when vaccines will be authorized and recommended for children under 12 years old has grown steadily since May 2021, peaking in mid-August.<sup>h</sup> This peak of interest aligned with many children returning to school or preparing to return to school for the 2021-2022 academic year. With reports of pediatric COVID-19 cases increasing,<sup>109,110</sup> including cases of pediatric hospitalizations and deaths,<sup>111,112,113,114</sup> many parents expressed feeling anxious and nervous about the risk of their child getting COVID-19, especially since many schools are implementing little to no mitigation measures.<sup>115,116,117,118</sup> This has driven many people to desire that COVID-19 vaccines be authorized soon for children younger than 12 years old.<sup>119,120,121</sup> However, health authorities have not provided clear information about when authorization and recommendation for children younger than 12 years old will come.<sup>122,123,124</sup> Some politicians have called for updated timelines to be released,<sup>125</sup> while some public health experts online have speculated when vaccines will be authorized and recommended.<sup>126</sup> Some public health experts and healthcare providers are calling for authorization for children younger than 12 years old to be expedited, given the recent approval of the Pfizer-BioNTech vaccine.<sup>127,128,129,130</sup> However, some parents said they have decided to not wait for authorization and have already gotten a COVID-19 vaccine for their child under 12 years old,<sup>131,132,133</sup> despite warnings from health authorities and healthcare providers against “off label” administration of the Pfizer-BioNTech vaccine.<sup>134,135,136,137</sup>

There continues to be a divide in parental opinions about whether children and adolescents need to be vaccinated.<sup>138,139,140,141</sup> Some parents do not believe that COVID-19 is a risk to children and that the risk for an adverse event from vaccination is higher.<sup>142,143,144</sup> Some other parents and journalists have attempted to debunk this belief.<sup>145,146</sup> Some consumers against vaccinating children argued that it would do little to control the spread of COVID-19.<sup>147</sup> This has spurred debate about whether COVID-19 vaccines should be mandated in K-12 schools, as some community vaccination requirements for children 12 years and older have already been put into place.<sup>148</sup> Some prominent public health figures and politicians have already backed mandating COVID-19 vaccines for schools,<sup>149,150,151</sup> which was met with support by some parents.<sup>152,153,154</sup> While other consumers, parents, and politicians felt mandating a new vaccine was too soon and an infringement on their medical freedom,<sup>155,156</sup> with some citing the lack of mandates for influenza vaccination as justification<sup>157</sup> or calling for the consideration of natural immunity.<sup>158</sup> Some groups are providing parents who refuse to vaccinate their children with information on how to seek an exemption.<sup>159</sup>



### Ways to act:

- Clarify the risk for serious COVID-19 for children and adolescents and what is known about their role in spreading the virus, tailoring to different demographics and age groups as possible. Highlight the benefits of vaccination for adolescents 12 years and older, such as reduced illness severity and length of illness.
- Amplify messages about the safety of vaccines for children 12 years and older, highlighting the low number of adverse events following the high number of vaccinations. Clarify that safety information and clinical trial data for children younger than 12 years old are not available and that these children should not be vaccinated at this time.
- Disseminate messages about the process for authorizing and recommending COVID-19 vaccines for children younger than 12 years old. Also, clarify how COVID-19 vaccines other than the Pfizer-BioNTech vaccine are being studied for children and adolescents under 18 years old.
- Encourage healthcare providers, particularly pediatricians, to proactively have conversations with parents of children under 12 years old. Expand talking points for healthcare providers to specifically address needs, concerns, and questions from parents of younger children.
- Partner with school administrators to amplify messages about where and how to vaccinate eligible children over 12 years old and to promote the benefits of vaccination for students, staff, and the broader community.
- Support research to better understand children and adolescents’ perceptions and opinions of COVID-19 vaccines and their motivation for getting vaccinated if they can on their own or with parental consent.

<sup>h</sup>GoogleTrends

<sup>i</sup>CDC-IFO

## Update: Announcement of Booster Dose Program of mRNA COVID-19 Vaccines for U.S. Adults

In the week following [the announcement of an mRNA COVID-19 vaccine booster dose program](#), news reports continued to highlight the political aspects of the announcement,<sup>160</sup> evolving confusion from consumers and experts,<sup>161,162,163,164</sup> and concerns about global vaccine equity.<sup>165,166</sup> Consumers online and in polls were most interested in clarifying the mechanics of the booster dose program and they expressed desire for COVID-19 vaccines to be authorized and prioritized for all school-aged children.<sup>167,168,169,170,171,172,173</sup>

News coverage of the Delta variant appears to be fueling consumer demand for booster doses as consumers who are fully vaccinated perceive an increase in their risk for COVID-19.<sup>174,175</sup> Some expressed the desire to receive, as a booster, a different brand from the vaccine they received for their primary series. Specifically, both consumers and healthcare providers began inquiring about administering the Moderna COVID-19 Vaccine as boosters to people who received other COVID-19 vaccines.<sup>178,179</sup> However, on September 5, 2021, some public health experts speculated that the Moderna COVID-19 Vaccine might not be approved in time for the promised roll out of the booster dose program during the week of September 20.<sup>180,181,182</sup> People who received Johnson & Johnson's Janssen COVID-19 Vaccine continued to express concerns about the vaccine's effectiveness, when or whether booster doses would be authorized or recommended for them, and whether they could seek one or more doses of an mRNA COVID-19 vaccine.<sup>183,184,185</sup>

Vocal vaccine deniers and consumers who deny COVID-19 continued to use the announcement of the booster dose program to undermine vaccine confidence with familiar misinformation tropes, such as:

- Booster doses are being promoted for financial gain of pharmaceutical companies.<sup>186</sup>
- COVID-19 vaccines are not effective and will require multiple booster doses.<sup>187,188</sup>
- There is no benefit to booster doses of COVID-19 vaccines and safety data is not available.<sup>189</sup>

## Continuing and Evolving Themes

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](#).

**Misinformation.** False claims circulated at low levels about COVID-19 vaccines causing Antibody Dependent Enhancement (ADE) and worsening infections in vaccinated consumers.<sup>190,191,192,193,194,195,196,197</sup> Vocal vaccine deniers claimed vaccination facilitates infection, might be inciting lethal cytokine storms,<sup>198</sup> and can lead to breakthrough infections.<sup>199</sup>

*New ways to act:*

- Partner with healthcare providers and other trusted messengers to amplify messages de-bunking claims that consumers who are vaccinated are more at risk for COVID-19.

**Variants of the virus that causes COVID-19.** The C.1.2 variant in particular attracted brief, intense attention with some claiming that this variant was more easily spread and has the ability to evade current vaccines.<sup>200,201,202,203</sup>

*New ways to act:*

- Amplify messages about how variants are being monitored and studied to understand how they impact the effectiveness of COVID-19 vaccines.

**Side Effects.** Concerns about potential near- and long-term effects of vaccination continue to be exploited by people who deny COVID-19 and vocal vaccine deniers. They have been amplifying misinformation about the purported impact of vaccination on adolescents and young adults, including impaired fertility and death or lasting heart damage.<sup>204,205,206,207,208,209,210,211,212,213</sup>

## Appendix: Inputs and Sources

Type	Input	Cadence	Sources	Tactics for Utilization
<b>Social Media Listening &amp; Media Monitoring</b>	Communication Surveillance Report	Daily on weekdays	<ul style="list-style-type: none"> <li>Google news</li> <li>Meltwater</li> <li>CrowdTangle</li> <li>Native platform searches</li> </ul>	<ul style="list-style-type: none"> <li>Share of voice topic analysis to identify themes</li> <li>Emerging topics</li> </ul>
	Meltwater	Daily	<ul style="list-style-type: none"> <li>Facebook, Twitter, Instagram</li> <li>Blogs</li> <li>News media</li> <li>Online forums</li> </ul>	<ul style="list-style-type: none"> <li>Share of voice topic analysis</li> <li>Emerging theme topics</li> <li>Identify high reach/velocity topics</li> </ul>
	OADC Channel Comment Analysis	Daily on weekdays	<ul style="list-style-type: none"> <li>Native platform searches</li> </ul>	<ul style="list-style-type: none"> <li>Sentiment analysis</li> <li>Identify message gaps/voids</li> </ul>
<b>Direct Reports</b>	CDC-INFO Metrics	Weekly	<ul style="list-style-type: none"> <li>CDC-INFO inquiry line list</li> <li>Prepared response (PR) usage report</li> </ul>	<ul style="list-style-type: none"> <li>Cross-compare PR usage with inquiry theme analysis</li> <li>Sentiment analysis</li> <li>Identify information gaps/voids</li> </ul>
	VTF Media Requests	Weekly	<ul style="list-style-type: none"> <li>Media request line list</li> </ul>	<ul style="list-style-type: none"> <li>Leading indicator for news coverage</li> <li>Identify information gaps/voids</li> </ul>
	Web Metrics	Weekly	<ul style="list-style-type: none"> <li>Top pages</li> <li>Google search queries</li> <li>Top FAQs</li> <li>Referring domains</li> </ul>	<ul style="list-style-type: none"> <li>Identify information gaps/voids,</li> <li>Identify keywords/search terms, changes in web traffic</li> </ul>
<b>Research</b>	Poll Review	Weekly	<ul style="list-style-type: none"> <li>Harris Poll, PEW research, Gallup Poll, KFF</li> <li>New data related to vaccine hesitancy</li> </ul>	<ul style="list-style-type: none"> <li>Identify socio-behavioral indicators related to motivation and intention to vaccinate</li> </ul>
	Literature Review	Weekly	<ul style="list-style-type: none"> <li>PubMed, LitCovid, ProQuest Central</li> <li>New data related to vaccine hesitancy</li> </ul>	<ul style="list-style-type: none"> <li>Identify current vaccination intention</li> <li>Identify barriers to vaccination</li> </ul>
<b>Third Party Reports</b>	Tanaq Social Listening +Media Monitoring Report	Weekly	<ul style="list-style-type: none"> <li>Meltwater</li> <li>Sprout Social</li> <li>First Draft</li> <li>Native platform searches</li> </ul>	<ul style="list-style-type: none"> <li>Trending topics</li> <li>Demographic and geographic conversation monitoring</li> </ul>
	CrowdTangle content insights report	Biweekly	<ul style="list-style-type: none"> <li>Facebook</li> </ul>	<ul style="list-style-type: none"> <li>Top pages (voices), groups</li> <li>General trends/sentiment analysis</li> <li>News analysis through posts</li> </ul>
	First Draft News Vaccine Misinformation Insights Report	Monthly	<ul style="list-style-type: none"> <li>Proprietary methods</li> </ul>	<ul style="list-style-type: none"> <li>Media trends analysis</li> <li>Emerging threats and data deficits</li> <li>Online vaccine narratives</li> </ul>
	Project VCTR	Weekly	<ul style="list-style-type: none"> <li><a href="#">Proprietary methods</a></li> </ul>	<ul style="list-style-type: none"> <li>National and regional trends in negative attitudes toward vaccination</li> <li>Conversations around Legislation</li> </ul>