

Differentiating Vaccine Resistant and Hesitant Adults



COVID-19 Polling

08.24.2021

in partnership with





Background

INTRVL conducted this analysis as part of a larger initiative with Up to Us to use modeled polling data to inform the development of new strategies and programs to raise vaccination rates in communities across the country in conjunction with other partners. This analysis follows an initial wave of polling conducted in May 2021, which Up to Us and INTRVL used to create an interactive [dashboard](#), providing county-level, demographic subgroup data.

Goals

To better understand adults who are considering, but have so far hesitated, to get vaccinated—defined in our analysis as “hesitant” but not “resistant” individuals—INTRVL modeled survey results on concerns about the vaccines and attitudes toward recent COVID-19 developments to gauge how sentiments vary by demographic and geographic groups.

Modeling

INTRVL has developed a modeling infrastructure that predicts the size of hesitant, resistant, and unvaccinated populations across the United States at the county level.

INTRVL's algorithm combines survey results on vaccine hesitancy with county level census and CDC data. The model is run with the latest CDC vaccination and case rate data as inputs to calibrate predictions.

*This approach allows INTRVL to **accurately predict** the size and demographics of counties' vaccinated populations. Combining this information with survey data, the model also estimates the proportion of the unvaccinated population that is hesitant vs. resistant and how their composition varies with respect to gender, age, race, urbanicity, income, education level, voting history, and other variables of interest.*

Takeaways

- One third of unvaccinated adults are hesitant, but not resistant, to the COVID-19 vaccines.
- Vaccine hesitancy is distinct from resistance. Hesitant adults skew younger, less political, and more suburban.
- Hesitant adults are focused on health. They worry about the vaccines' side effects, but the Delta variant also concerns them.
- Continued focus on the threat of Delta, Pfizer-BioNTech's full FDA approval, and the proven safety of the vaccines over time may be persuasive to over 20 million hesitant adults, who have so far chosen to remain unvaccinated.

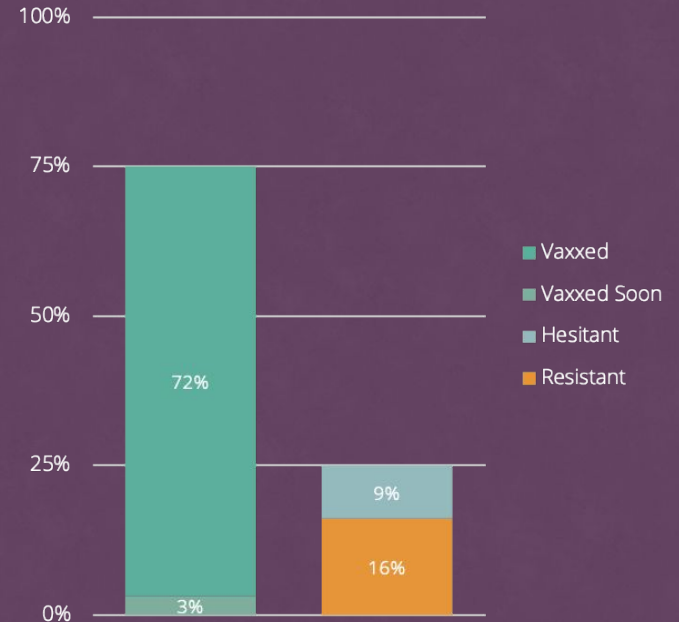
Poll Results

From July 27 - August 2, INTRVL conducted online and offline surveys of American adults about the COVID-19 vaccines (n = 4,620).

Results were modeled and calibrated on August 19 using CDC data and ACS population estimates.

For more information on the polling and modeling methodology, please visit the Appendix.

Vaccination Status of 18+ Adults



- Vaxed:** Received at least one dose of a COVID-19 vaccine
- Vaxed Soon:** Very likely to receive a COVID-19 vaccine
- Hesitant:** Somewhat likely to receive a COVID-19 vaccine
- Resistant:** Not very likely to receive a COVID-19 vaccine

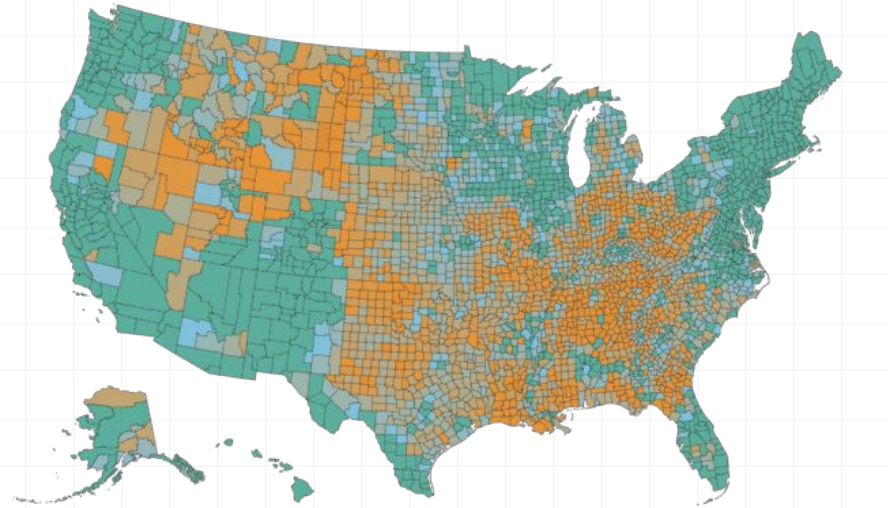
Vaccine Resistance Prevalent in Large Parts of Country

Although around 75% of US adults have received a vaccine,

3 in 10

counties have a high percentage (>25%) of resistant residents, who are very unlikely to get a COVID-19 vaccine soon.

*(Survey: July 27 - August 2, Modeled: August 19)
Further Data in Appendix - Slide 20*



**Most
Resistant**



**Least
Resistant**

More vaccination visualizations are available on INTRVL's [public dashboard](#)

Resistant and Hesitant Adults Have Different Profiles

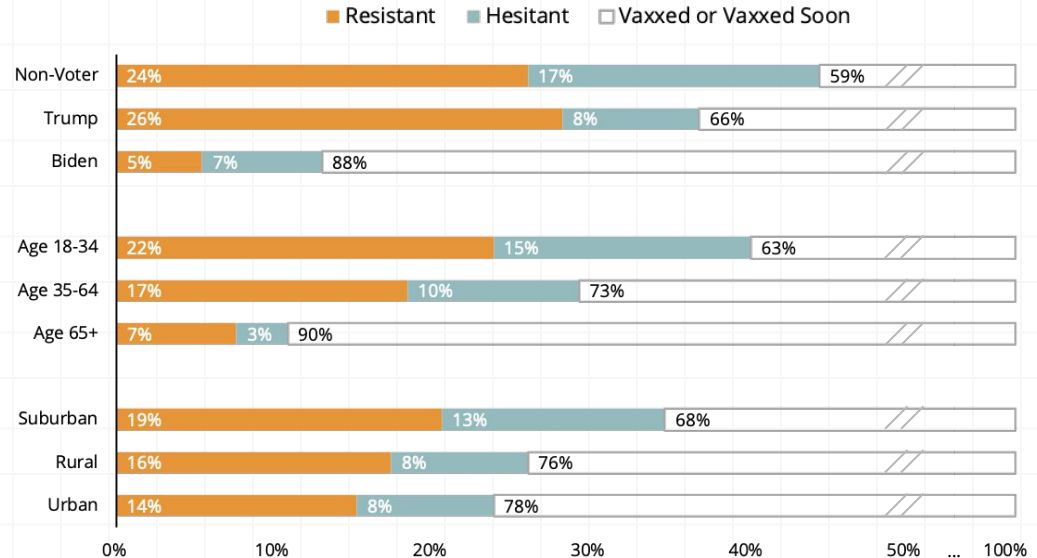
Resistant adults—the least likely to get vaccinated—skew more conservative and older.

Hesitant adults skew less political, younger, and more suburban.

Both are concentrated in the South and Great Plains.

*(Survey: July 27 - August 2, Modeled: August 19)
Further Data in Appendix - Slide 20*

Resistance & Hesitancy within Political, Age, & Density Groups

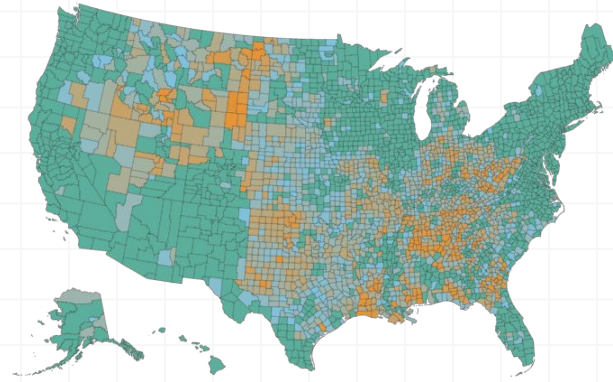


Hesitancy Scenarios

Even if the number of resistant adults remains the same, reducing vaccine hesitancy achieves large gains in geographic coverage.

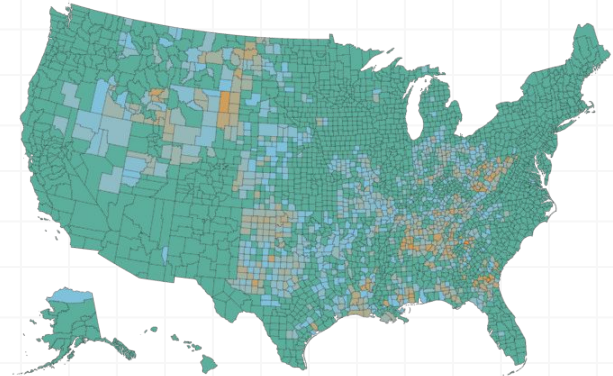
Vaccinating two thirds of hesitant adults doubles the number of counties achieving the 70% vaccination goal.

33%
Reduction in Hesitancy



5 in 10
counties at 70%
planned, partial, &
full vaccinations

67%
Reduction in Hesitancy



7 in 10
counties at 70%
planned, partial, &
full vaccinations



Reasons for Hesitancy More Tied to Health Risks

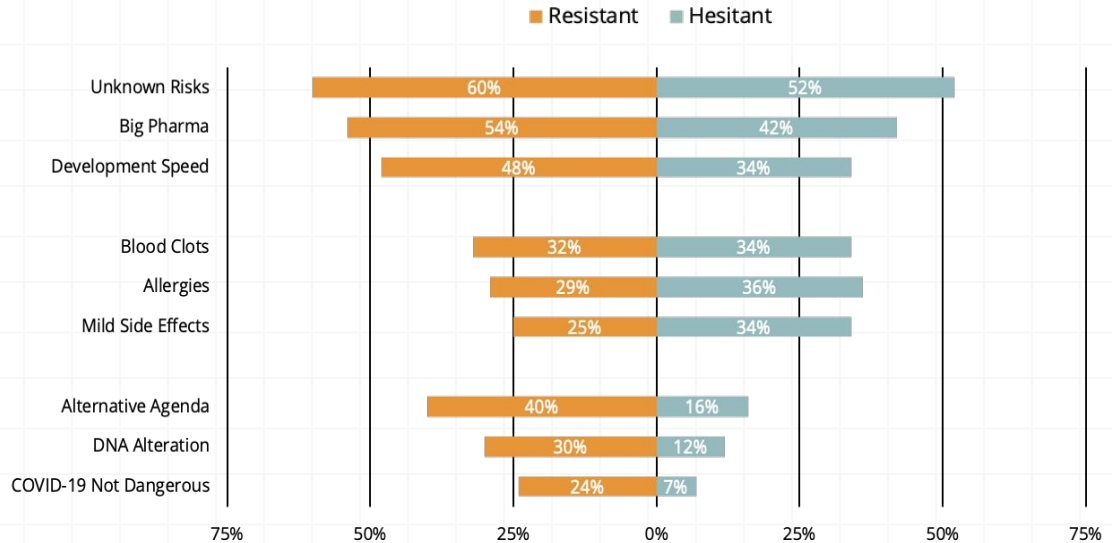
Many unvaccinated adults are concerned by the vaccines' unknown risks and "big pharma."

Hesitant adults are more concerned by health risks.

Conspiracies concern more resistant adults.

*(Survey: July 27 - August 2, Modeled: August 19)
Further Data in Appendix - Slide 22*

Selected Vaccine Concerns of Resistant & Hesitant Adults



Hesitant Adults Have More Concerns in South and Midwest

Unknown risks, “big pharma,” & microchip concern more prevalent in some regions.

1 in 5

hesitant adults in the South are concerned about the cost of the vaccines vs. 1 in 10 in other regions.

Selected Reasons for Vaccine Hesitancy by Region

	<i>Hesitant Adults in Region</i>			
	South	Midwest	Northeast	West
Unknown Risks	51%	58%	47%	51%
Big Pharma	44%	43%	37%	38%
Microchips	31%	20%	14%	17%
Cost	20%	11%	11%	10%

(Survey: July 27 - August 2, Modeled: August 19)
Further Data in Appendix - Slide 22

Census definitions of American regions available [here](#).

Delta Worries the Hesitant

Even though hesitant adults are concerned about the vaccines...

Hesitant adults are also worried about the Delta variant and hospitalizations.

Headlines about new COVID-19 restrictions most concerned resistant adults.

Hesitant Adults
Most Concerning
Headlines

Delta Variant



51%

Hospitalized



32%

Resistant Adults
Most Concerning
Headlines

Restrictions



31%

Delta Variant



25%

*(Survey: July 27 - August 2, Modeled: August 19)
Further Data in Appendix - Slide 24*

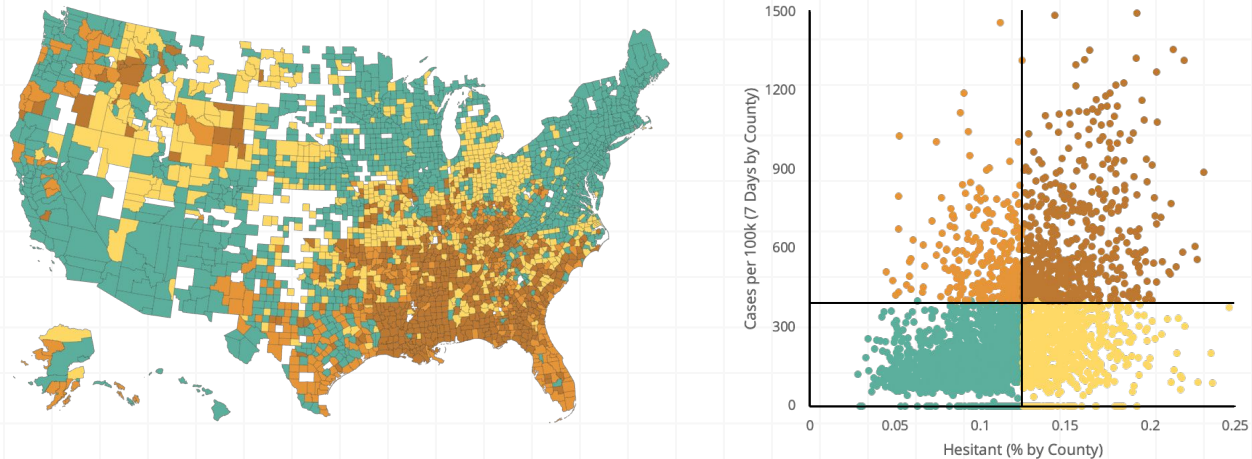
Many Hesitant Adults Live in High COVID-19 Case Areas

Over 500 counties have high case rates and a large number of hesitant residents.

Note: Not all counties regularly report their COVID-19 case rates to the CDC.

(Survey: July 27 - August 2, Modeled: August 19)

Counties by CDC Cases per 100k (7 Days) and Hesitancy (%)



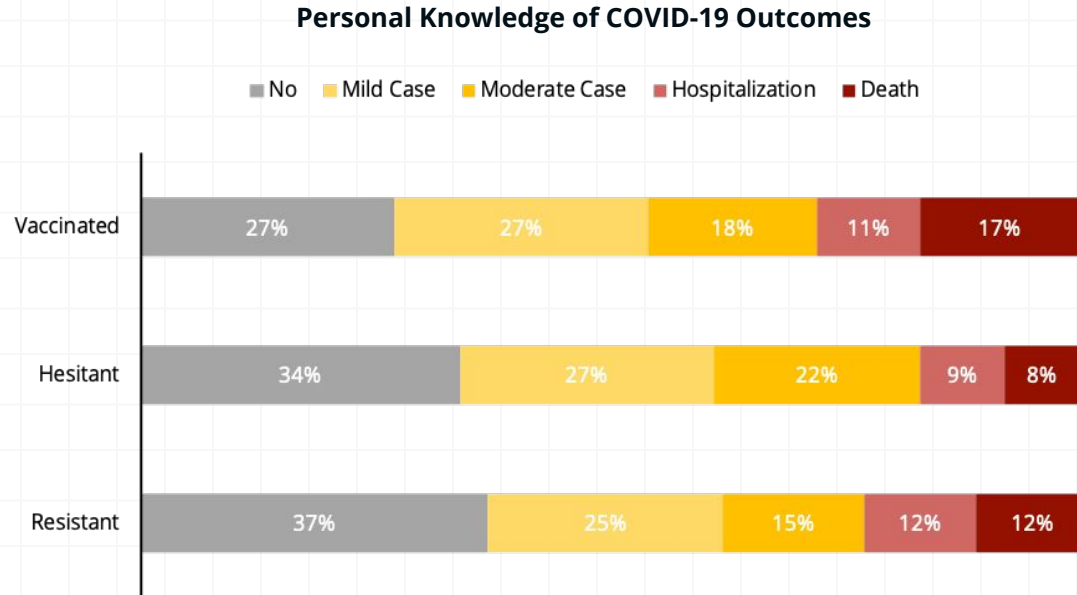
- Low Hesitancy, Low Cases
- High Hesitancy, Low Cases
- Low Hesitancy, High Cases
- High Hesitancy, High Cases

Hesitant Adults Have Less Personal Exposure to COVID-19

While around 30% of vaccinated adults personally know an individual who was hospitalized or died...

Less than 20% of hesitant adults know severe cases, and over 30% do not know any COVID-19 cases.

*(Survey: July 27 - August 2, Modeled: August 19)
Further Data in Appendix - Slide 28*

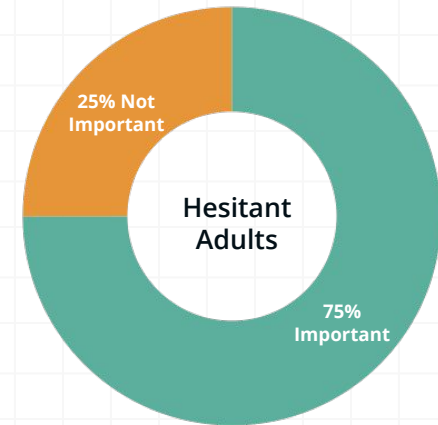
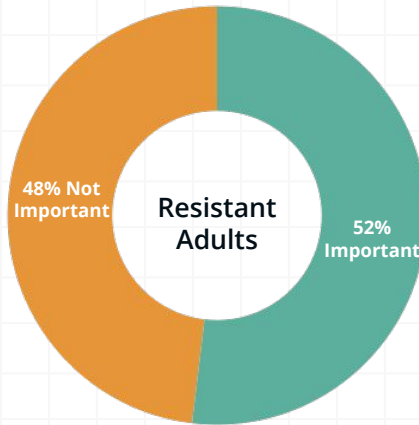


Hesitant Adults Consider FDA Approval Important

Full FDA approval of Pfizer-BioNTech's vaccine addresses an important factor for 3 in 4 hesitant adults.

Only half of resistant adults think full FDA approval is an important consideration.

Importance of Full FDA Approval in the Decision to Get Vaccinated



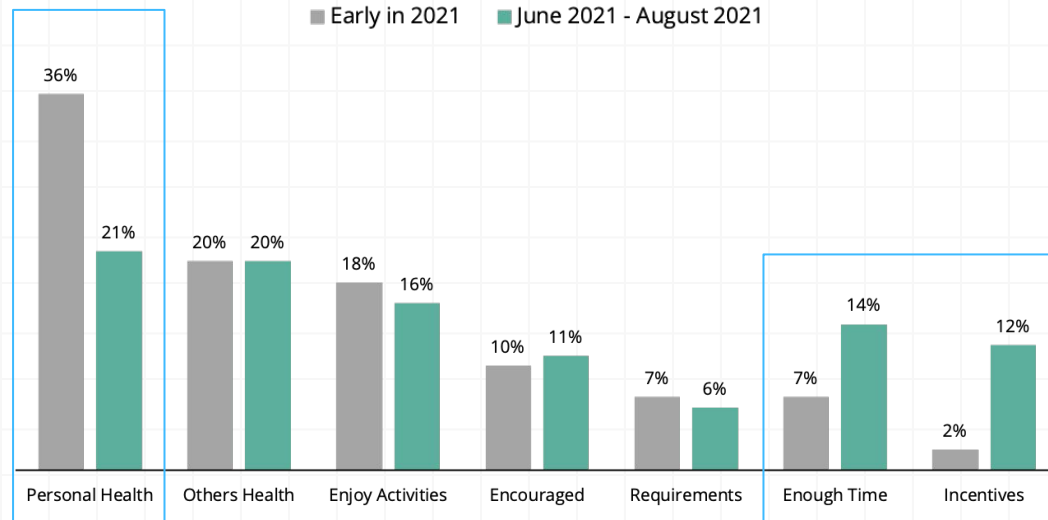
*(Survey: July 27 - August 2, Modeled: August 19)
Further Data in Appendix - Slide 26*

Motivation for Vaccination Changing Over Time

When the vaccines became available, over half of adults were motivated by their own or others' health.

Now, 1 in 4 recent adopters have been assured the vaccines are safe or have been sufficiently incentivized.

Motivation for Vaccination by Time Period



(Survey: July 27 - August 2, Modeled: August 19)

Summary

For more information on the polling and modeling methodology, please visit the Appendix.

- Despite the prevalence of vaccine resistance in many regions, one third of unvaccinated adults are “hesitant” or at least somewhat likely to get a COVID-19 vaccine.
- **Vaccine hesitancy is distinct from resistance.** Hesitant adults skew younger, less political, and more suburban.
- Reducing hesitancy nationally can have a big impact, doubling the number of counties achieving the 70% vaccination goal.
- **Allergies, mild side effects, and other health problems concern hesitant adults, but headlines about the Delta variant also worry them.** Resistant adults are more conspiratorial and less concerned by recent headlines.
- Continued emphasis on the threat of Delta, Pfizer-BioNTech’s full FDA approval, and the proven safety of the vaccines over time **may be persuasive to over 20 million hesitant adults.**

Selected Questions

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Vaccination Status - Demographics

As of today, have you received a COVID-19 vaccination shot?

	All	Gender		Age			Race			
		Women	Men	18-34	35-64	65+	White	Black	Hispanic	Asian
Yes, I am fully / partially vaccinated	72%	72%	71%	59%	73%	89%	71%	72%	73%	75%
No, I have not received a COVID-19 vaccine	28%	28%	29%	41%	27%	11%	29%	28%	27%	25%

(Survey: July 27 - August 2, Modeled: August 19)

For average margin of error estimates, please visit the Appendix

Vaccination Status - Additional

As of today, have you received a COVID-19 vaccination shot?

	All	Income		2020 Vote			Parent		College Graduate	
		\$0-100k	\$100k+	Biden	Trump	No Vote	Yes	No	Yes	No
Yes, I am fully / partially vaccinated	72%	69%	91%	86%	63%	57%	75%	71%	83%	67%
No, I have not received a COVID-19 vaccine	28%	31%	9%	14%	37%	43%	25%	29%	17%	33%

(Survey: July 27 - August 2, Modeled: August 19)

For average margin of error estimates, please visit the Appendix

Vaccination Resistance & Hesitancy - Demographics

How likely are you to get vaccinated for COVID-19?

	All	Gender		Age			Race			
		Women	Men	18-34	35-64	65+	White	Black	Hispanic	Asian
Resistant (1-2)	56%	56%	56%	54%	56%	62%	57%	47%	57%	66%
Hesitant (3-6)	33%	34%	33%	37%	32%	26%	33%	43%	28%	29%
Likely (7)	11%	9%	12%	9%	12%	12%	11%	10%	16%	5%

*Unvaccinated Respondents
Scale 1-7 (Survey: July 27 - August 2, Modeled: August 19)*

For average margin of error estimates, please visit the Appendix

Vaccination Resistance & Hesitancy - Additional

How likely are you to get vaccinated for COVID-19?

	All	Income		2020 Vote			Parent		College Graduate	
		\$0-100k	\$100k+	Biden	Trump	No Vote	Yes	No	Yes	No
Resistant (1-2)	56%	56%	59%	36%	71%	55%	58%	55%	47%	58%
Hesitant (3-6)	33%	34%	20%	50%	21%	39%	30%	35%	42%	31%
Likely (7)	11%	9%	21%	14%	8%	7%	12%	10%	11%	11%

*Unvaccinated Respondents
Scale 1-7 (Survey: July 27 - August 2, Modeled: August 19)*

For average margin of error estimates, please visit the Appendix

Vaccine Concerns - Resistant & Hesitant

Which of the following are the primary reasons you are not likely to get vaccinated?

	All	Gender		Age			Race			
		Women	Men	18-34	35-64	65+	White	Black	Hispanic	Asian
Unknown risks	57%	60%	54%	54%	58%	68%	59%	46%	59%	59%
Pharmaceutical company accountability	50%	52%	47%	48%	53%	41%	48%	48%	57%	53%
Vaccine development speed	43%	47%	39%	44%	44%	35%	42%	37%	52%	46%
Blood clot	32%	34%	30%	29%	35%	35%	31%	32%	38%	29%
Allergic reaction	32%	34%	29%	32%	32%	31%	30%	35%	37%	35%
Alternative agenda for vaccination	31%	32%	30%	30%	34%	23%	30%	22%	43%	42%

Unvaccinated Respondents

Top Multiple Choice (Survey: July 27 - August 2, Modeled: August 19)

For average margin of error estimates, please visit the Appendix

Vaccine Concerns - Resistant vs. Hesitant

Which of the following are the primary reasons you are not likely to get vaccinated?

	All	Resistant	Hesitant
Unknown risks	57%	60%	52%
Pharmaceutical company accountability	50%	54%	42%
Vaccine development speed	43%	48%	34%
Blood clot	32%	32%	33%
Allergic reaction	32%	29%	36%
Alternative agenda for vaccination	31%	40%	16%

*Unvaccinated Respondents
Top Multiple Choice (Survey: July 27 - August 2, Modeled: August 19)*

For average margin of error estimates, please visit the Appendix

Reactions to Recent Headlines - Resistant & Hesitant

Which of the following COVID-19 news reports concern you?

	All	Gender		Age			Race			
		Women	Men	18-34	35-64	65+	White	Black	Hispanic	Asian
Delta variant is more contagious	35%	42%	28%	35%	35%	35%	37%	38%	32%	22%
None of these news reports concern me	31%	25%	37%	31%	31%	35%	30%	30%	38%	26%
New lockdowns or restrictions	29%	29%	29%	23%	35%	27%	28%	24%	26%	55%
COVID-19 "long haulers"	25%	32%	17%	20%	27%	36%	27%	26%	16%	26%
Increasing hospitalizations for young adults	22%	23%	20%	23%	20%	23%	22%	21%	27%	15%
Deaths among unvaccinated	14%	17%	11%	18%	11%	11%	15%	20%	8%	11%

Unvaccinated Respondents

Multiple Choice (Survey: July 27 - August 2, Modeled: August 19)

For average margin of error estimates, please visit the Appendix

Reactions to Recent Headlines - Resistant vs. Hesitant

Which of the following COVID-19 news reports concern you?

	All	Resistant	Hesitant
Delta variant is more contagious	35%	25%	51%
None of these news reports concern me	31%	40%	16%
New lockdowns or restrictions	29%	31%	15%
COVID-19 "long haulers"	25%	20%	32%
Increasing hospitalizations for young adults	22%	16%	32%
Deaths among unvaccinated	14%	10%	21%

*Unvaccinated Respondents
Multiple Choice (Survey: July 27 - August 2, Modeled: August 19)*

For average margin of error estimates, please visit the Appendix

FDA Authorization - Resistant & Hesitant

The COVID-19 vaccines currently have FDA emergency use authorization. Is the lack of full FDA approval an important factor in your decision to not get vaccinated?

	All	Gender		Age			Race			
		Women	Men	18-34	35-64	65+	White	Black	Hispanic	Asian
Important (3-5)	61%	63%	58%	57%	65%	52%	61%	57%	61%	64%
Not Important (1-2)	39%	37%	42%	43%	35%	48%	39%	43%	39%	36%

*Unvaccinated Respondents
Scale 1-5 (Survey: July 27 - August 2, Modeled: August 19)*

For average margin of error estimates, please visit the Appendix

FDA Authorization - Resistant vs. Hesitant

The COVID-19 vaccines currently have FDA emergency use authorization. Is the lack of full FDA approval an important factor in your decision to not get vaccinated?

	All	Resistant	Hesitant
Important (3-5)	61%	52%	75%
Not Important (1-2)	39%	48%	25%

*Unvaccinated Respondents
Scale 1-5 (Survey: July 27 - August 2, Modeled: August 19)*

For average margin of error estimates, please visit the Appendix

Personal COVID-19 Experience - Resistant & Hesitant

Have you had or do you personally know anyone who has had COVID-19?
If so, of the people you know, what was the most severe case?

	All	Gender		Age			Race			
		Women	Men	18-34	35-64	65+	White	Black	Hispanic	Asian
No, I do not know anyone who had COVID-19	35%	31%	38%	37%	36%	27%	34%	31%	41%	30%
Yes, someone with a mild case	26%	27%	25%	28%	23%	24%	25%	28%	23%	31%
Yes, someone with a moderate case	18%	20%	16%	15%	19%	28%	18%	19%	17%	25%
Yes, someone who was hospitalized	11%	11%	11%	17%	15%	13%	11%	15%	8%	9%
Yes, someone who died due to COVID-19	10%	11%	10%	6%	14%	15%	11%	8%	11%	4%

*Unvaccinated Respondents
(Survey: July 27 - August 2, Modeled: August 19)*

For average margin of error estimates, please visit the Appendix

Personal COVID-19 Experience - Resistant vs. Hesitant

Have you had or do you personally know anyone who has had COVID-19?
If so, of the people you know, what was the most severe case?

	All	Resistant	Hesitant
No, I do not know anyone who had COVID-19	35%	37%	34%
Yes, someone with a mild case	26%	25%	27%
Yes, someone with a moderate case	18%	15%	22%
Yes, someone who was hospitalized	11%	12%	9%
Yes, someone who died due to COVID-19	10%	12%	8%

*Unvaccinated Respondents
(Survey: July 27 - August 2, Modeled: August 19)*

For average margin of error estimates, please visit the Appendix

Medical Professionals - Resistant & Hesitant

Do you know any doctors, nurses, pharmacists, EMTs, or other medical professionals who are not getting vaccinated? What is their most common reason?

	All	Gender		Age			Race			
		Women	Men	18-34	35-64	65+	White	Black	Hispanic	Asian
Yes, they do not believe the vaccines are safe	26%	25%	28%	27%	26%	27%	25%	31%	31%	20%
Yes, they have personal health reasons	11%	12%	10%	14%	7%	12%	10%	13%	9%	18%
Yes, they do not believe they are effective	10%	11%	9%	11%	10%	11%	9%	14%	11%	21%
No	53%	52%	53%	48%	57%	50%	57%	42%	49%	40%

*Unvaccinated Respondents
(Survey: July 27 - August 2, Modeled: August 19)*

For average margin of error estimates, please visit the Appendix

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Polling & Modeling Methodology

Around 4,600 survey responses were collected between July 27 and August 2, 2021, asking respondents a panel of questions about vaccine hesitancy. Demographic and geographic information were also collected from each respondent. To collect a representative sample, surveys were conducted using a number of modes, including live callers to cell phones and landlines, text-to-web messaging, and online survey panels.

On August 19, demographic and geographic characteristics were combined with 2019 ACS 5-year population estimates, CDC vaccination and COVID-19 data, and 2020 election data to perform a multilevel regression and poststratification (MRP) and generate population estimates specific to each demographic (gender, age, race) and geographic level (county, state). MRP is an established method for utilizing nationally representative polling to generate geographic and sub-population estimates and consistently outperforms disaggregation.

Margin of Error Estimates

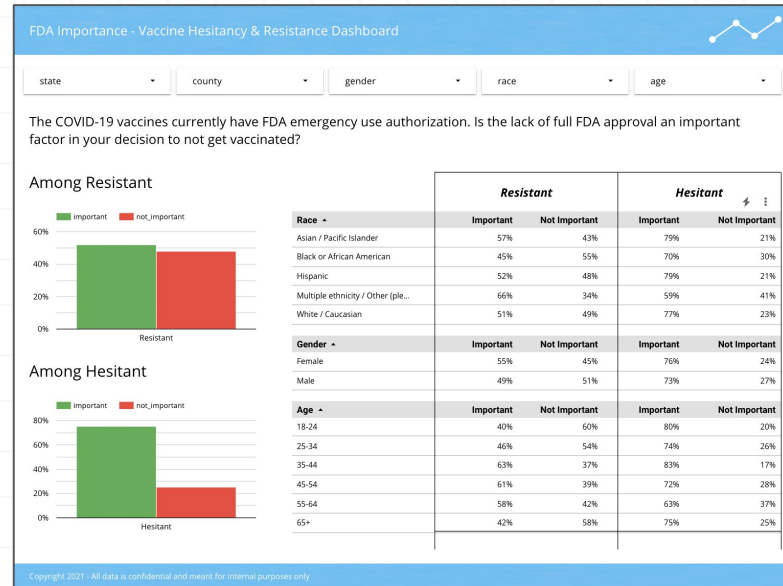
	Approximate N	5,000	
		80% MOEs	95% MOEs
National Topline	Vaccination Rate	1.3%	1.7%
	Unvaccinated Hesitancy Level	2.1%	3.0%
	Hesitancy Level Concern	2.8%	4.3%
Average State	Vaccination Rate	5.0%	7.5%
	Unvaccinated Hesitancy Level	6.5%	9.8%
	Hesitancy Level Concern	9.1%	13.3%
National Demo (White Subgroups)	Vaccination Rate	2.6%	4.0%
	Unvaccinated Hesitancy Level	4.9%	7.5%
	Hesitancy Level Concern	7.3%	11.0%
National Demo (Black / Hispanic Subgroups)	Vaccination Rate	4.8%	7.0%
	Unvaccinated Hesitancy Level	8.4%	12.3%
	Hesitancy Level Concern	12.0%	17.8%
Average County Demo (White Subgroups)	Vaccination Rate	10.0%	14.5%
	Unvaccinated Hesitancy Level	13.7%	19.6%
	Hesitancy Level Concern	19.2%	27.1%
Average County Demo (Black / Hispanic Subgroups)	Vaccination Rate	10.9%	16.0%
	Unvaccinated Hesitancy Level	15.8%	22.4%
	Hesitancy Level Concern	20.8%	29.2%

INTRVL's Vaccine Tooling

INTRVL has created internal and external data visualization tools to inform our analysis and enable the tracking of vaccine uptake, hesitancy, and resistance at the county level.

Our public dashboard is available [at this link](#). For more information about accessing internal results, please [reach out](#) to our team.

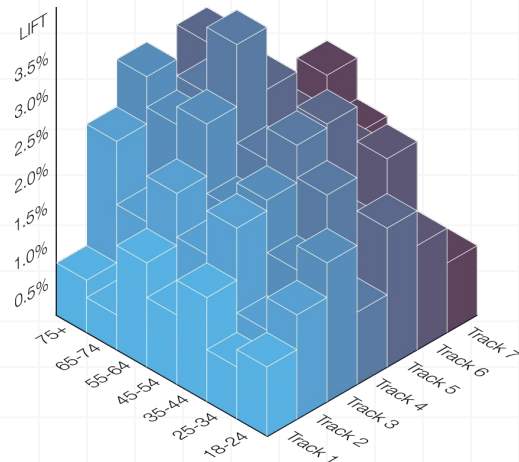
Internal Polling Dashboard



About INTRVL

INTRVL is a media and public opinion measurement organization, which uses data science to better quantify and optimize campaign messaging and targeting, through a deeper understanding of audiences.

For more information about our work and team, visit our [website](#).





INTRVL

Thank You!

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