

Partnering for **Vaccine Equity**



What's Driving Vaccine Hesitancy? A Framework for Understanding Barriers and Concerns in Your Community
11.09.2022

Zoom Features

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Today's Speaker



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UNDERSTANDING COVID-19 VACCINE HESITANCY

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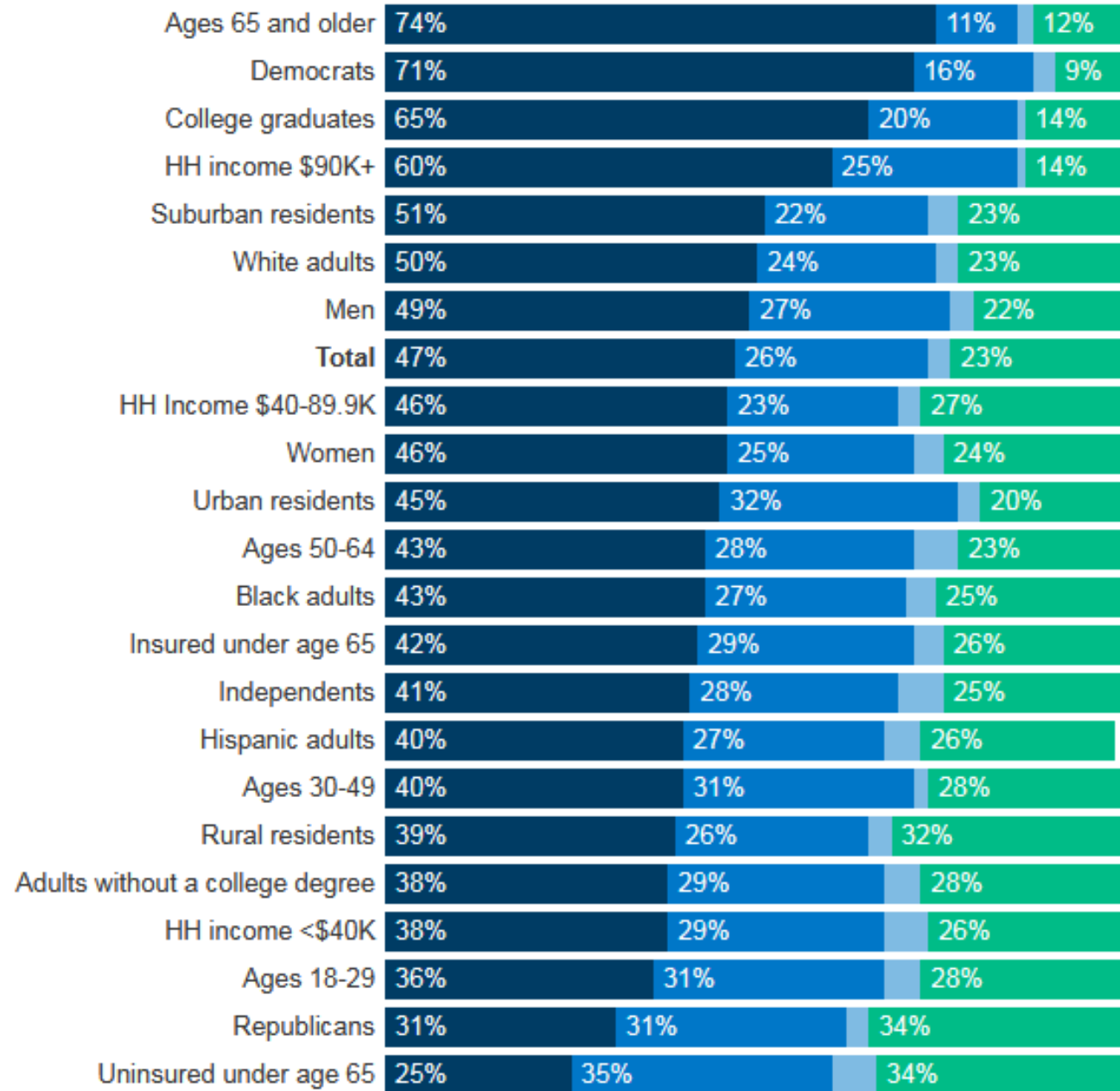




Today: Part I

- COVID-19 Vaccine Status
 - Who is Vaccinated?
 - Who is Hesitant?
 - What Drives COVID-19 Vaccine Hesitance?
- Communication Implications
- Part II Communication Strategies: Motivational Interviewing

■ Vaccinated and boosted
 ■ Fully vaccinated and not boosted
 ■ Partially vaccinated
 ■ Unvaccinated

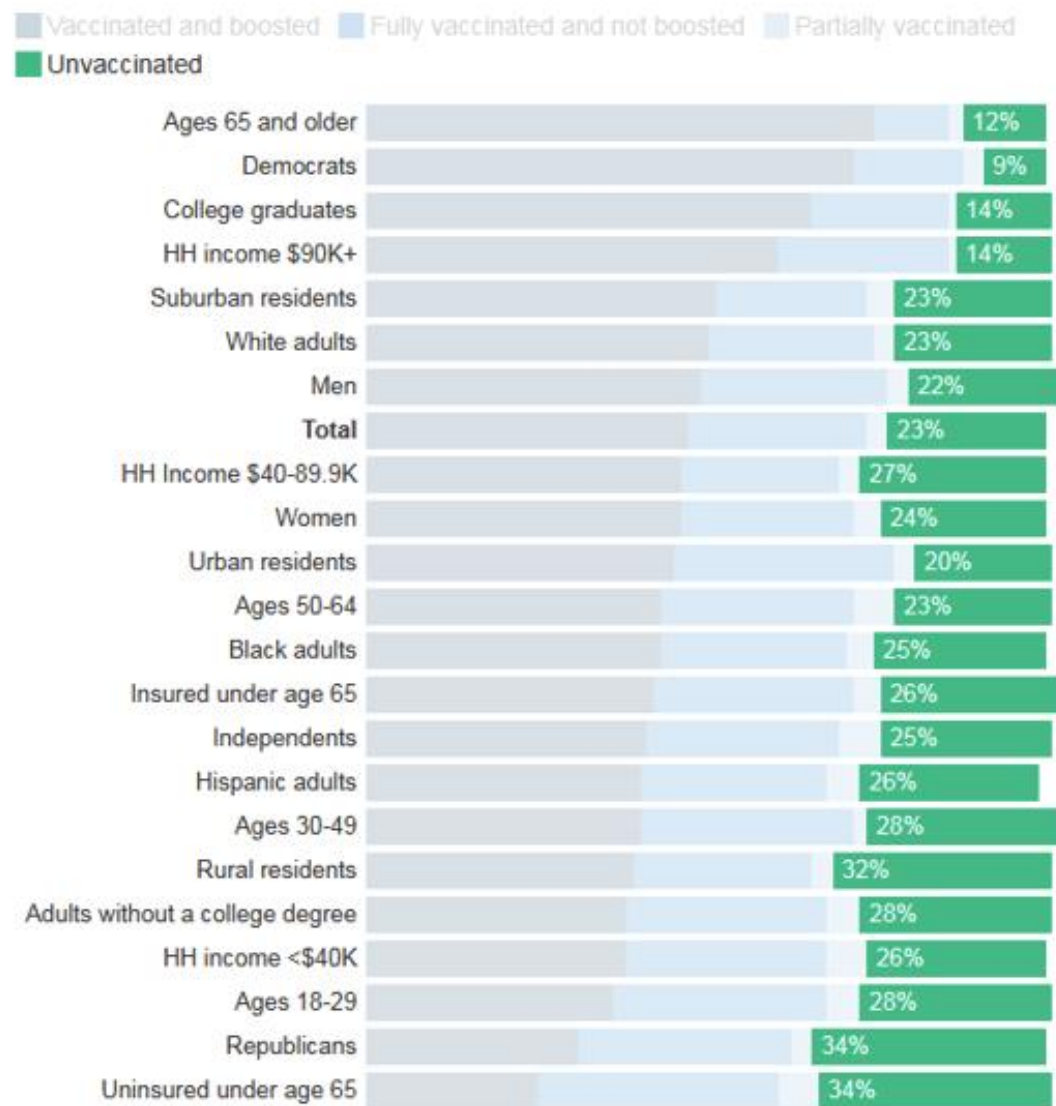


SOURCE: [KFF COVID-19 Vaccine Monitor](#) (September 15-26, 2022)

N=1,534

SOURCE: KFF COVID-19 Vaccine Monitor (September 15-26, 2022)

N=1,534



NOTE: See topline for full question wording.

SOURCE: [KFF COVID-19 Vaccine Monitor \(September 15-26, 2022\)](#) • PNG

[KFF COVID-19 Vaccine Monitor](#)

Summary Demographic Drivers of Vaccine Status

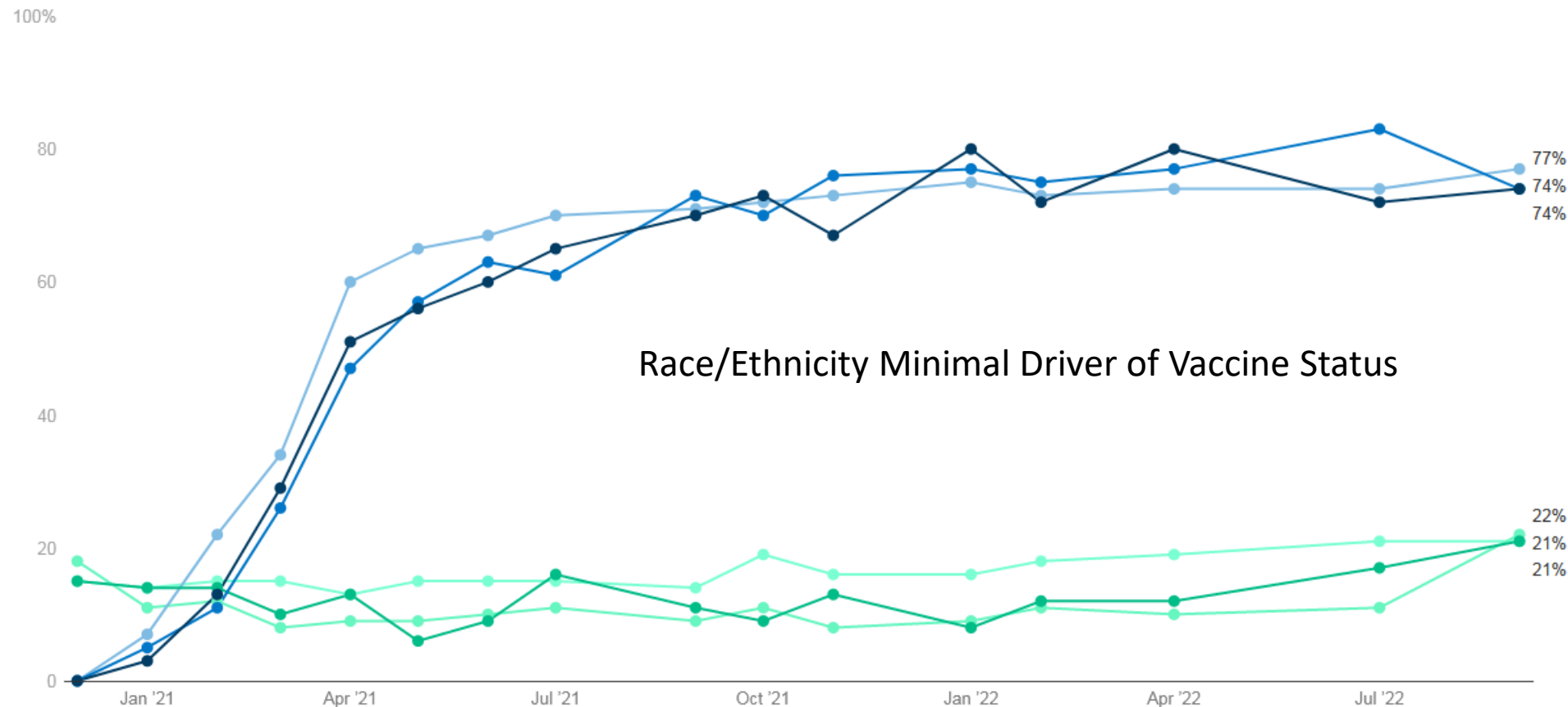
GROUPS		Difference	
		% Unvaccinated	
Political Party			
	Republican	34%	25%
	Democrat	9%	
Age			
	Age 18-29	28%	16%
	Age > 65	12%	
Education			
	< College	28%	14%
	College +	14%	
Income			
	Low Income < 40K	26%	12%
	High Income > 90k	14%	
Rural/Urban			
	Rural	32%	9%
	Suburban	23%	

Demographic Drivers of Vaccine Hesitancy

Percent in each group who say they are **already vaccinated** or **definitely will not get vaccinated** against COVID-19 in each given month:

Party ID **Race/Ethnicity** Community type Education

— Black, vaccinated — Hispanic, vaccinated — White, vaccinated — Black, definitely won't get it — Hispanic, definitely won't get it — White, definitely won't get it



Race/Ethnicity Minimal Driver of Vaccine Status

Won't Get it= Is there a chance you will get vaccinated for COVID-19 at some point, or will ***you definitely not get vaccinated?***"

SOURCE: KFF COVID-19 Vaccine Monitor (September 15-26, 2022)

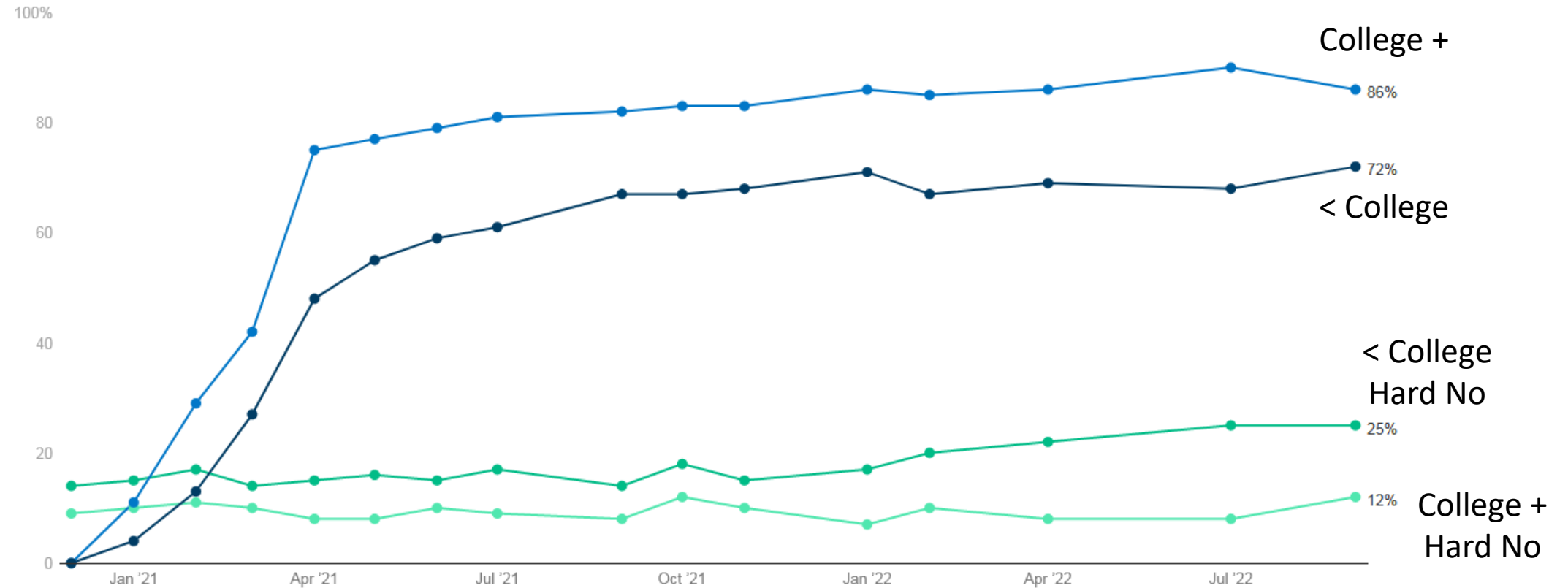
Vaccinated = ***at least one dose*** of a COVID-19 vaccine

VACCINES AND BOOSTERS

Percent in each group who say they are **already vaccinated** or **definitely will not get vaccinated** against COVID-19 in each given month:

Party ID Race/Ethnicity Community type **Education**

— Less than college, vaccinated — College degree, vaccinated — Less than college, definitely won't get it — College degree, definitely won't get it



Won't Get it= Is there a chance you will get vaccinated for COVID-19 at some point, or will ***you definitely not get vaccinated?***"

SOURCE: [KFF COVID-19 Vaccine Monitor](#) (September 15-26, 2022)

Vaccinated = ***at least one dose*** of a COVID-19 vaccine

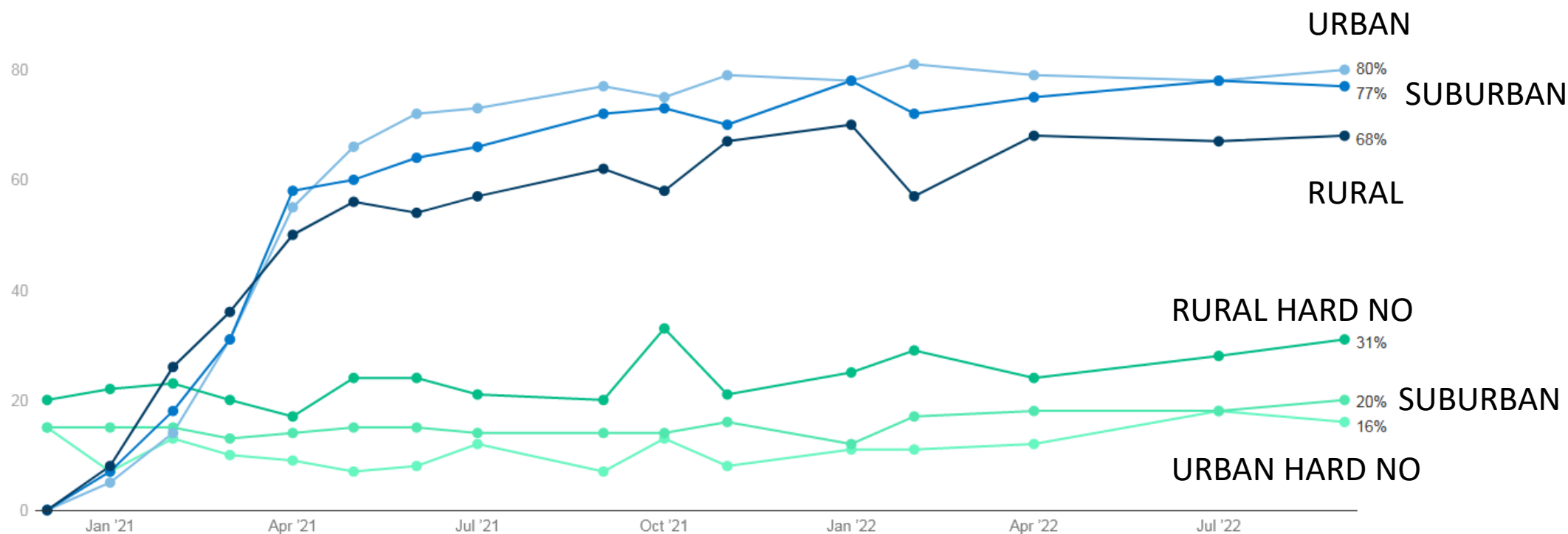
VACCINES AND BOOSTERS

Percent in each group who say they are **already vaccinated** or **definitely will not get vaccinated** against COVID-19 in each given month:

Party ID Race/Ethnicity **Community type** Education

— Rural, vaccinated — Suburban, vaccinated — Urban, vaccinated — Rural, definitely won't get it — Suburban, definitely won't get it — Urban, definitely won't get it

100%

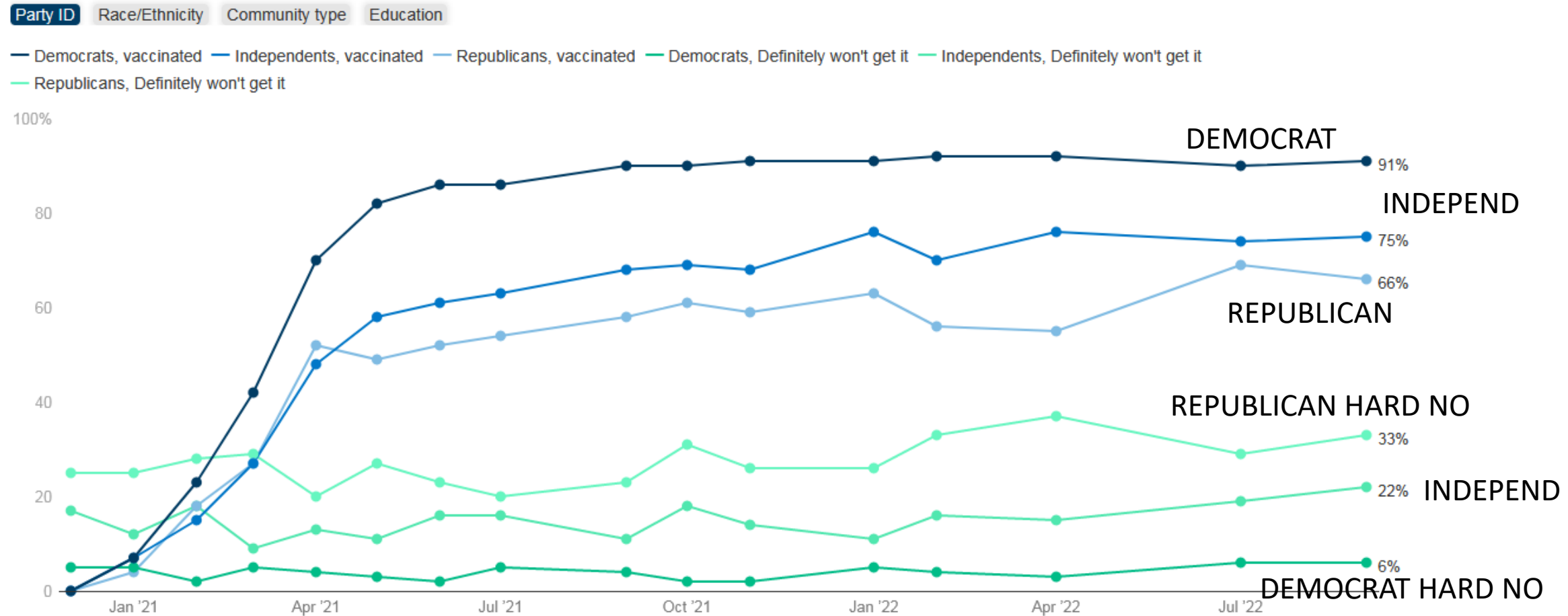


Won't Get it= Is there a chance you will get vaccinated for COVID-19 at some point, or will ***you definitely not get vaccinated?***"

SOURCE: [KFF COVID-19 Vaccine Monitor](#) (September 15-26, 2022)

Vaccinated = ***at least one dose*** of a COVID-19 vaccine

Percent in each group who say they are **already vaccinated** or **definitely will not get vaccinated** against COVID-19 in each given month:



Won't Get it= Is there a chance you will get vaccinated for COVID-19 at some point, or will ***you definitely not get vaccinated?***"

SOURCE: [KFF COVID-19 Vaccine Monitor](#) (September 15-26, 2022)

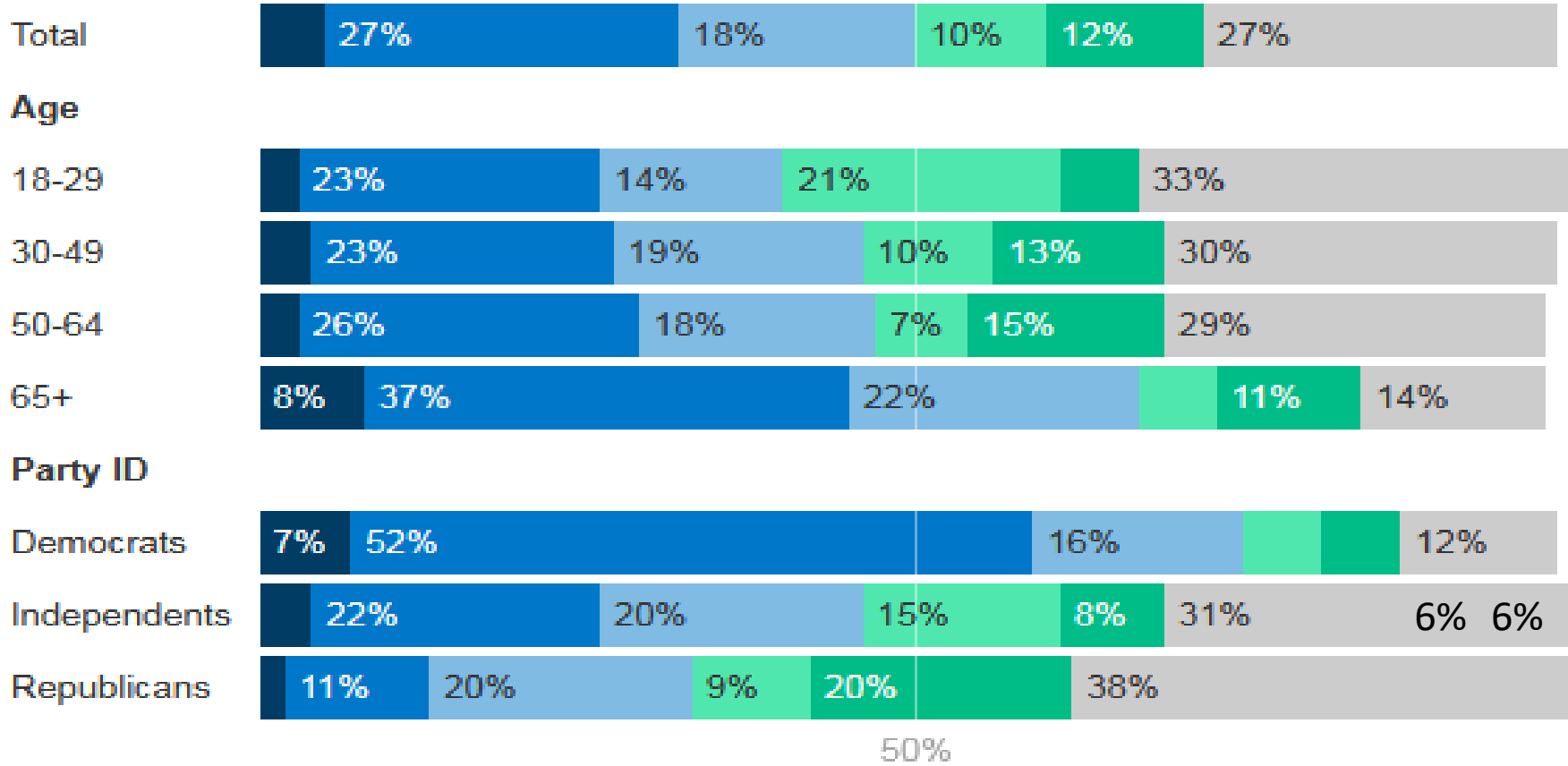
Vaccinated = ***at least one dose*** of a COVID-19 vaccine

Summary Demographic Drivers of Vaccine Hesitancy

GROUPS		Difference
	% Hard No	
Political Party		
Republican	33%	27%
Democrat	6%	
Rural/Urban		
Rural	31%	15%
Suburban	16%	
Education		
< College	25%	13%
College +	12%	

New Bivalent/Omicron Booster

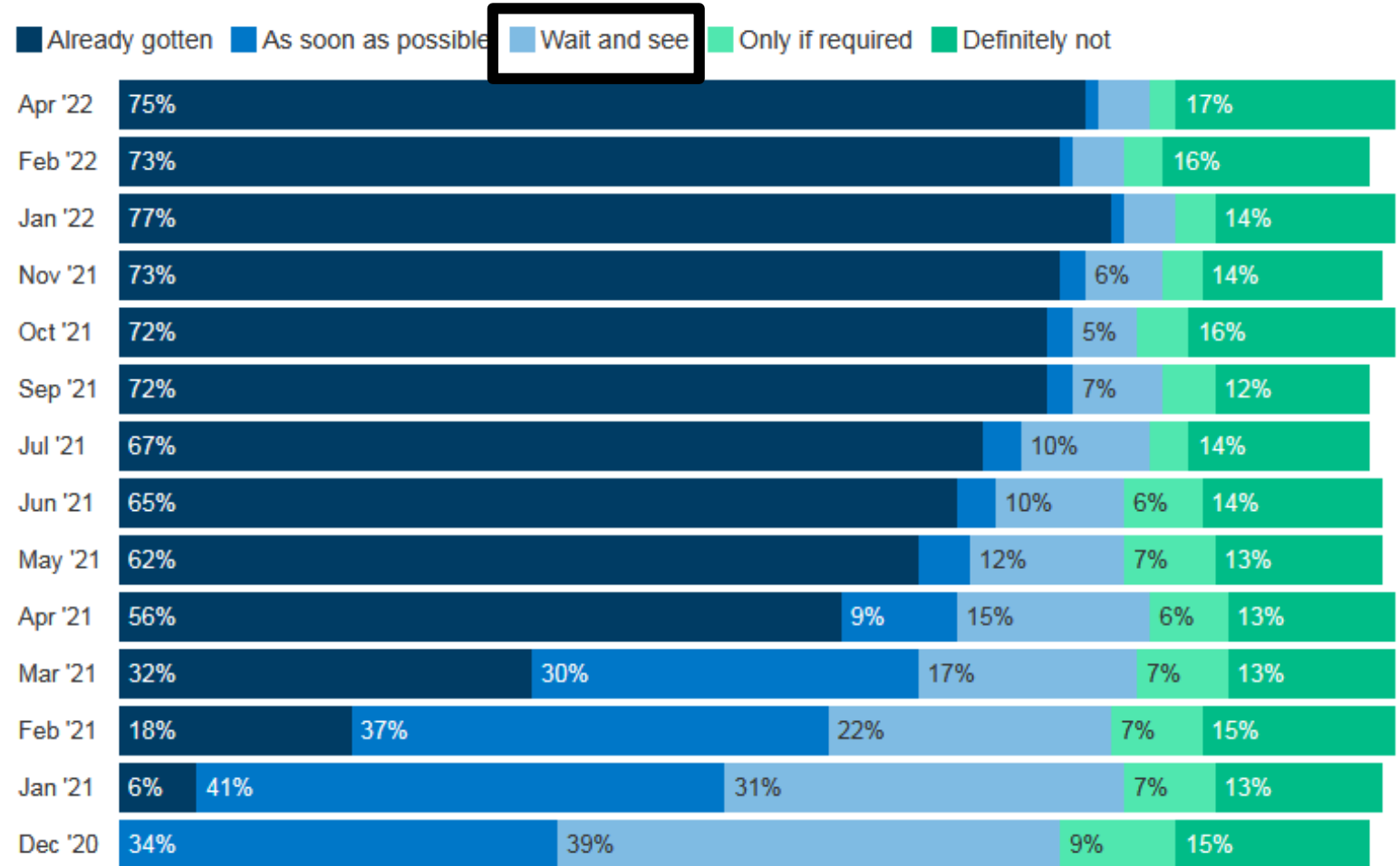
■ Got updated booster ■ As soon as possible ■ Wait and see ■ Only if required
■ Definitely not get updated booster ■ Not eligible for updated booster (unvaccinated or partially vaccinated)



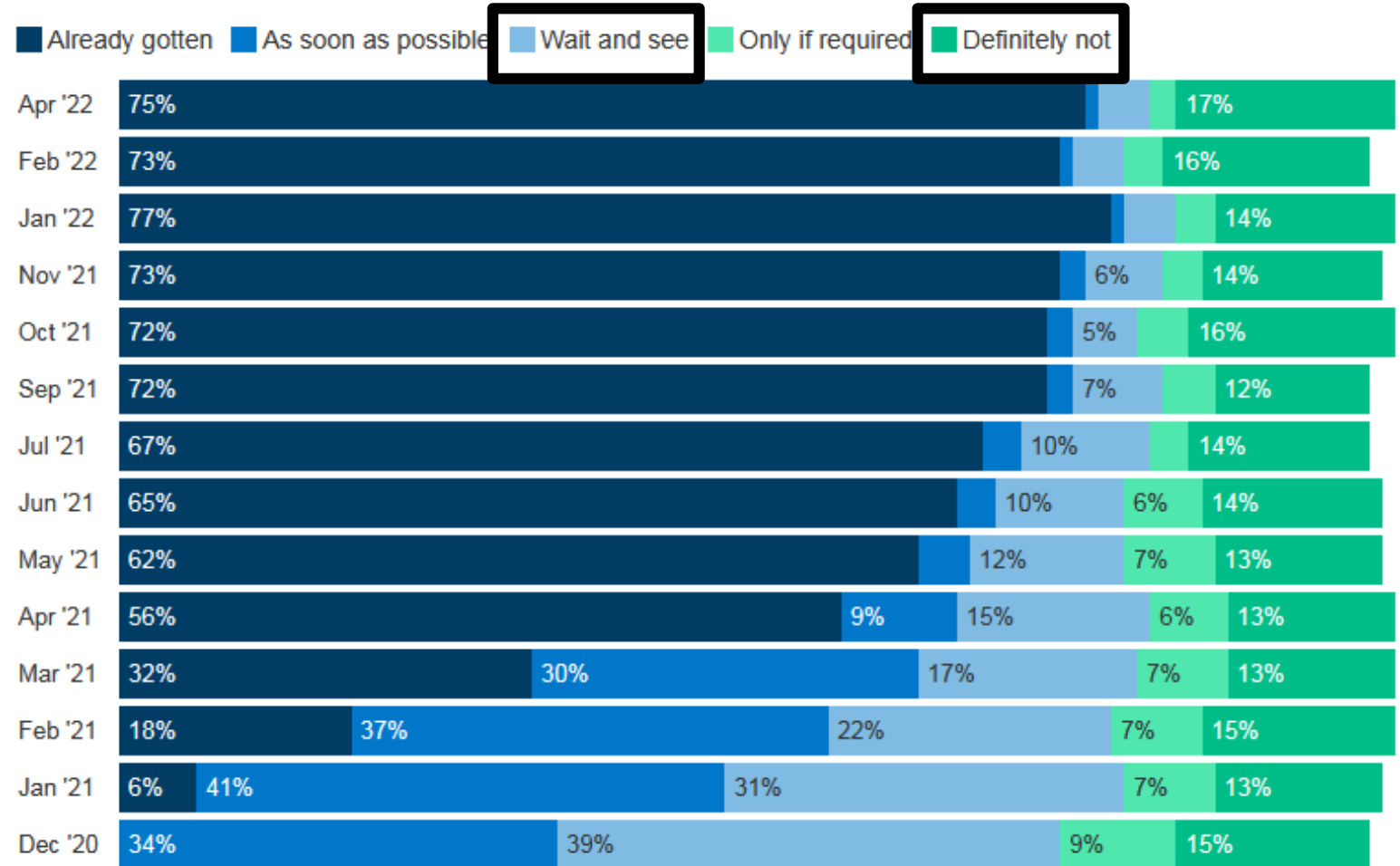
SOURCE: [KFF COVID-19 Vaccine Monitor](#) (September 15-26, 2022)

Wait and See

Wait and See Shrinking: Hard NO Stable

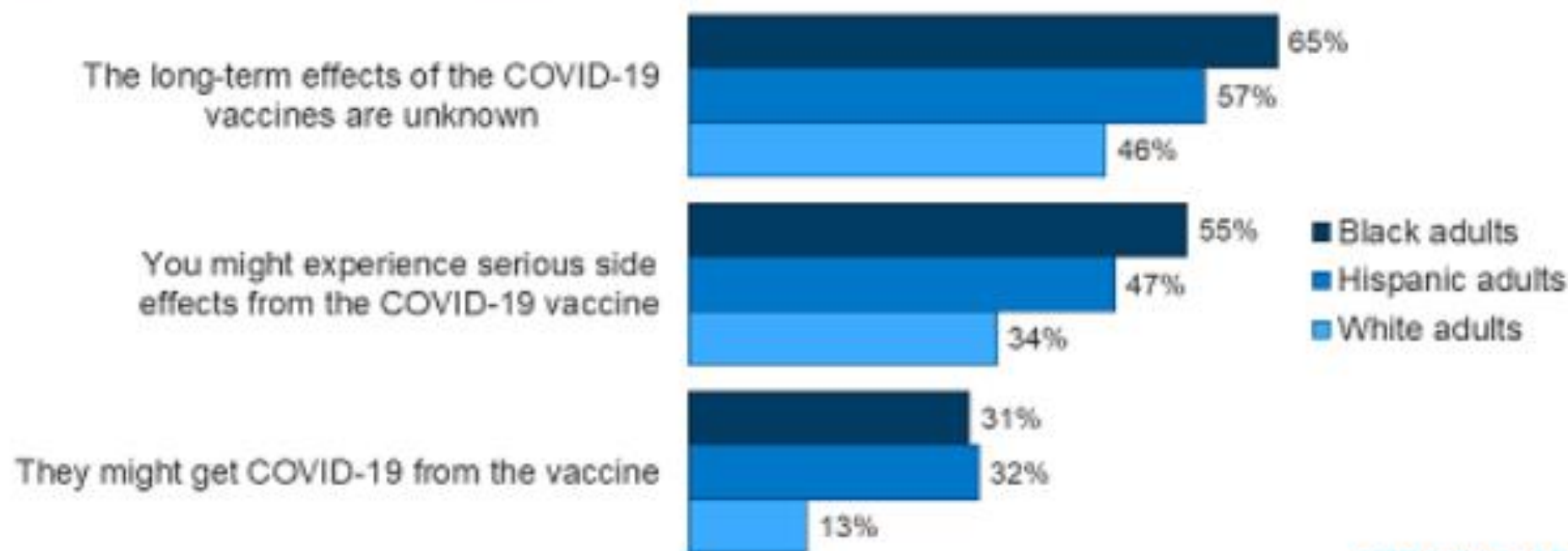


Wait and See Shrinking: Hard NO Stable



“Wait And See” Black And Hispanic Adults Express More Concerns About COVID-19 Vaccines Than White Counterparts

Among those who want to “wait and see” how the COVID-19 vaccine is working for others, percent who say they are **very concerned** about each of the following:



NOTE: Among those who have not been vaccinated against COVID-19

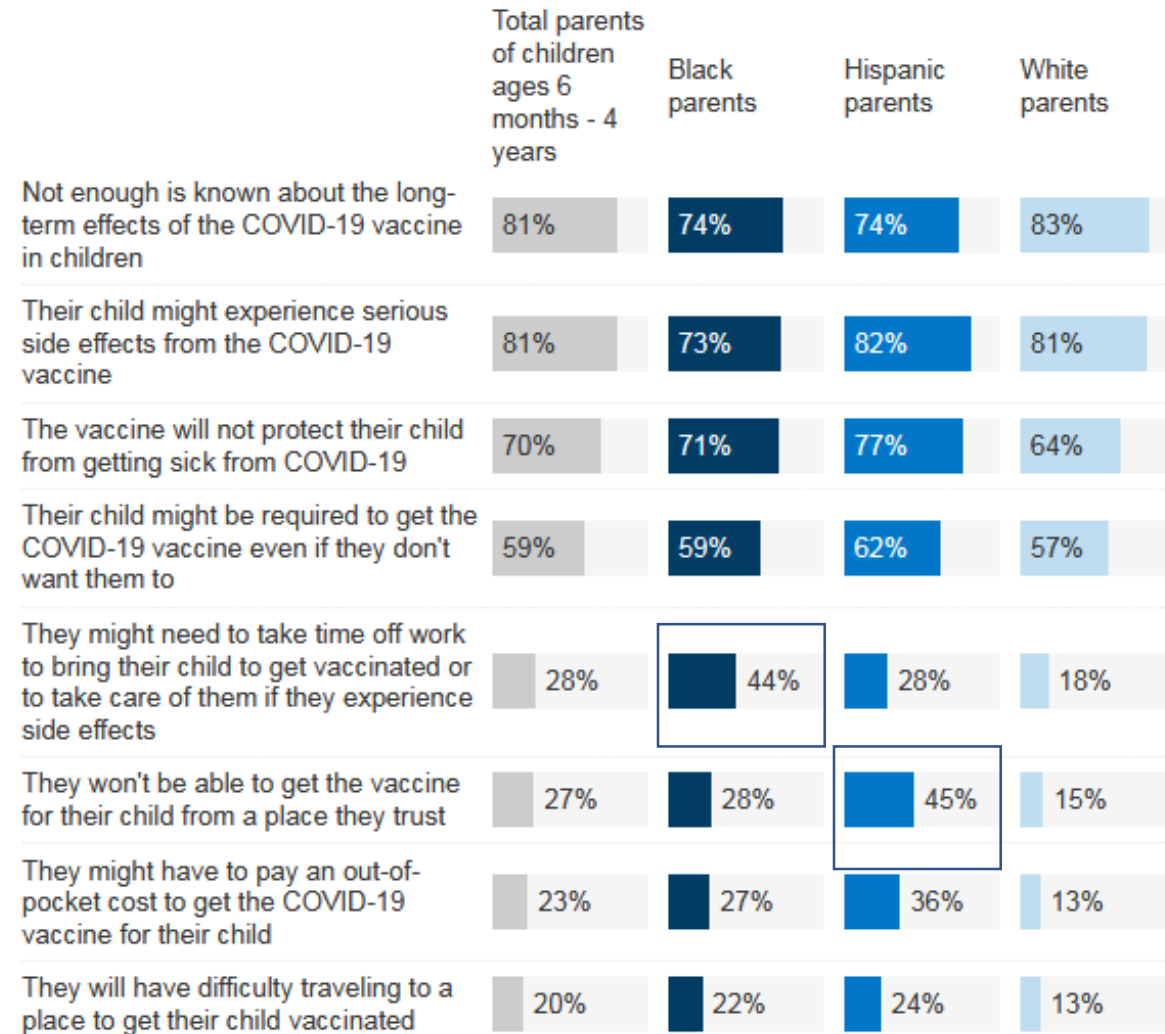
SOURCE: KFF COVID-19 Vaccine Monitor (conducted Jan. 11-18, 2021). See topline for full question wording.

**KFF COVID-19
Vaccine Monitor**

Child Vaccine

PARENTAL CONCERN OVER CHILD VACCINE

Percent of parents of unvaccinated children between the ages of 6 months and 4 years who say they are **very** or **somewhat concerned** about...



Understanding Hesitancy

Eroding Republican Trust^ in the CDC

	DECEMBER 2020	JUNE 2021	APRIL 2022
Democrats	88%	91%	89%
Republicans	57%	48%	41%
TOTAL	73%	71%	64%

^ Percent who say they have a **great deal** or a **fair amount** of trust of CDC to provide reliable information about the COVID-19 vaccines

SOURCE: KFF COVID-19 Vaccine Monitor (September 15-26, 2022)

Eroding Republican Trust^ in Dr. Fauci

	DECEMBER 2020	JUNE 2021	APRIL 2022
Democrats	89%	90%	86%
Republicans	44%	29%	25%

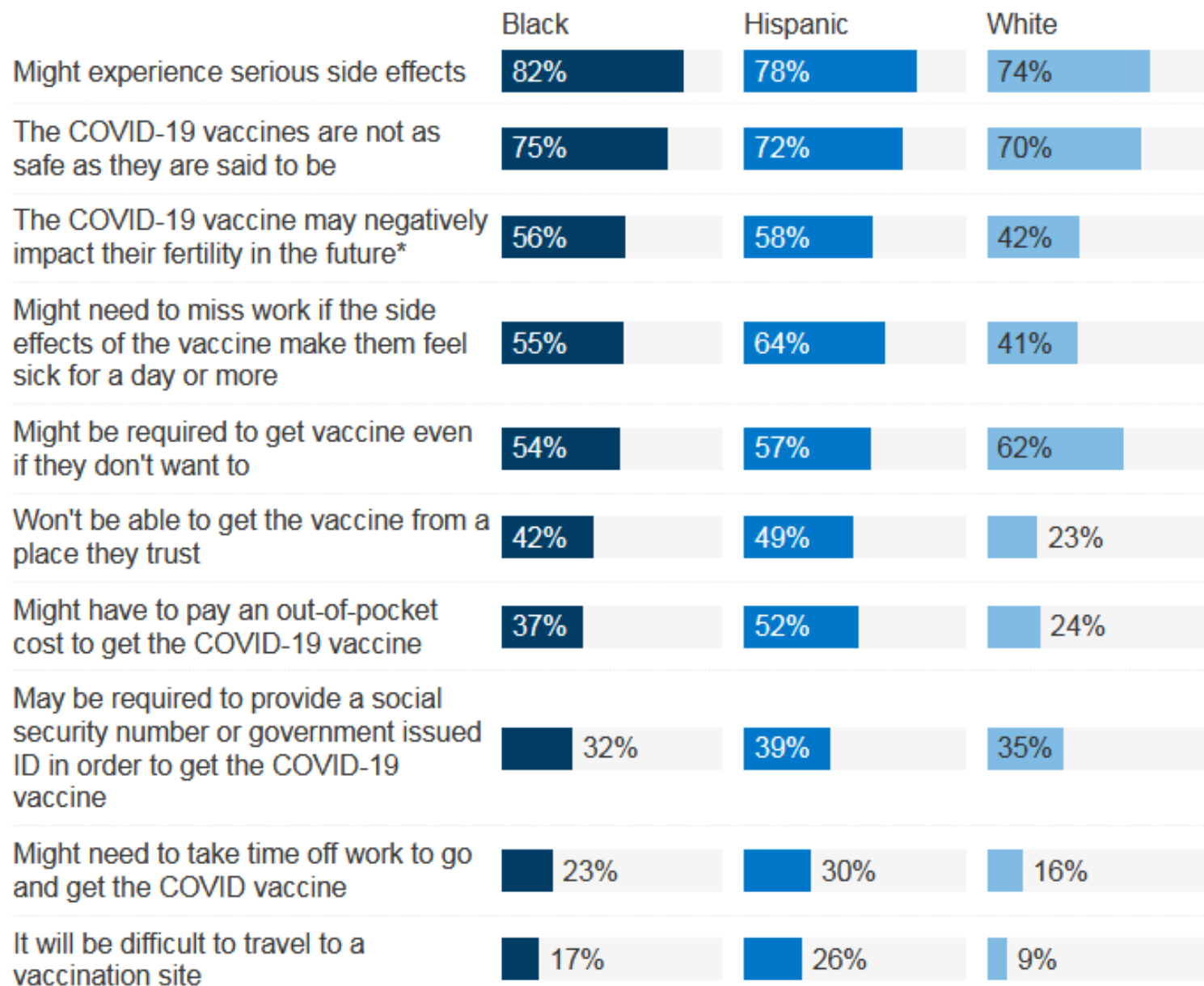
^ Percent who say they have a **great deal** or a **fair amount** of trust of CDC to provide reliable information about the COVID-19 vaccines

SOURCE: KFF COVID-19 Vaccine Monitor (September 15-26, 2022)

Attitudes of Unvaccinated

Source: KFF Dashboard
Early 2021

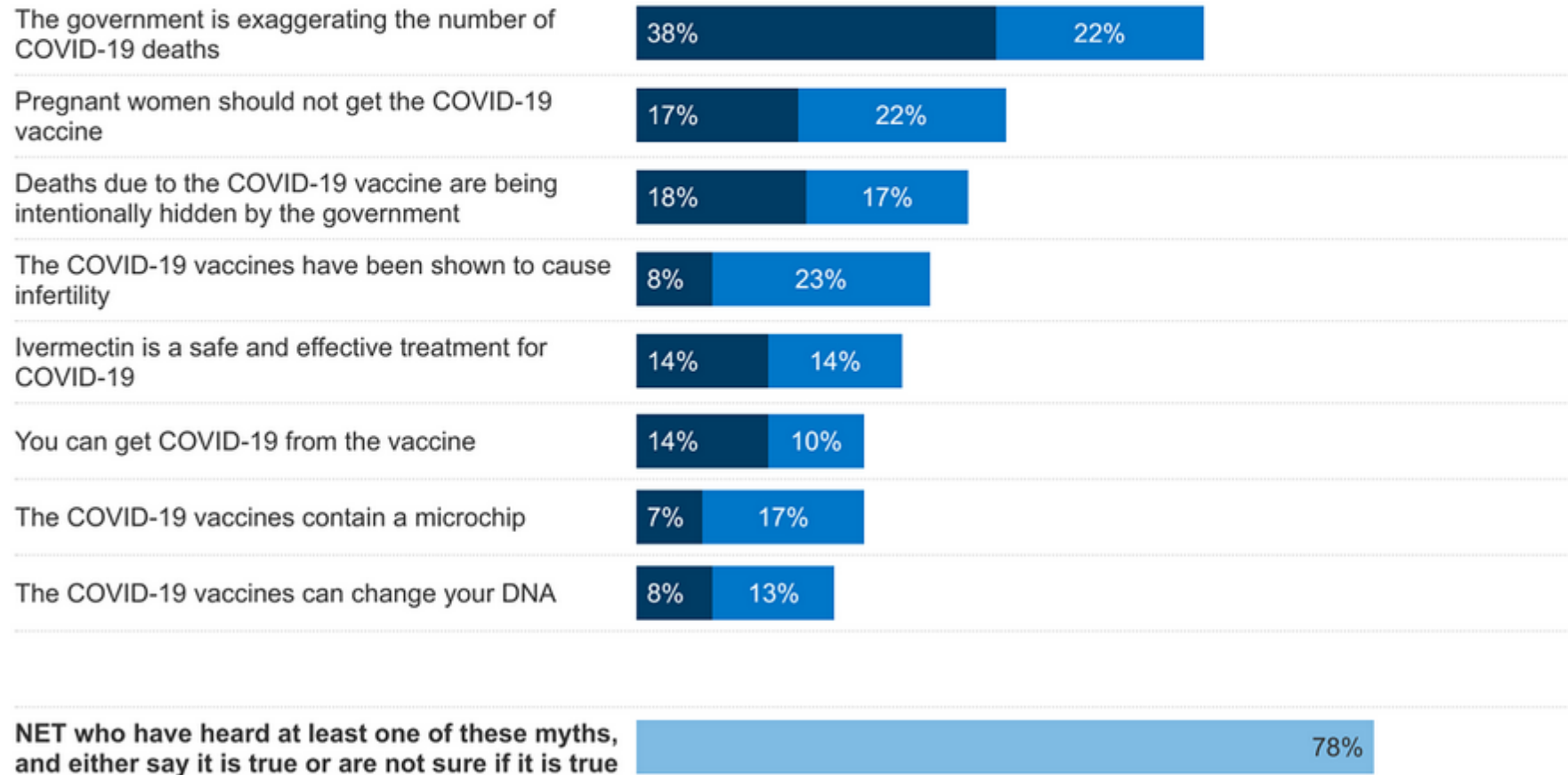
Percent who say they are very or somewhat concerned about each of the following when it comes to the COVID-19 vaccine:



Nearly Eight In Ten Believe Or Are Unsure About At Least One Common Falsehood About COVID-19 Or The Vaccine

Have you heard anyone say or have you read anywhere that...? IF YES: To the best of your knowledge is that true or false, or do you not know whether it is true or false?

■ Have heard, believe to be true ■ Have heard, don't know if true ■ NET



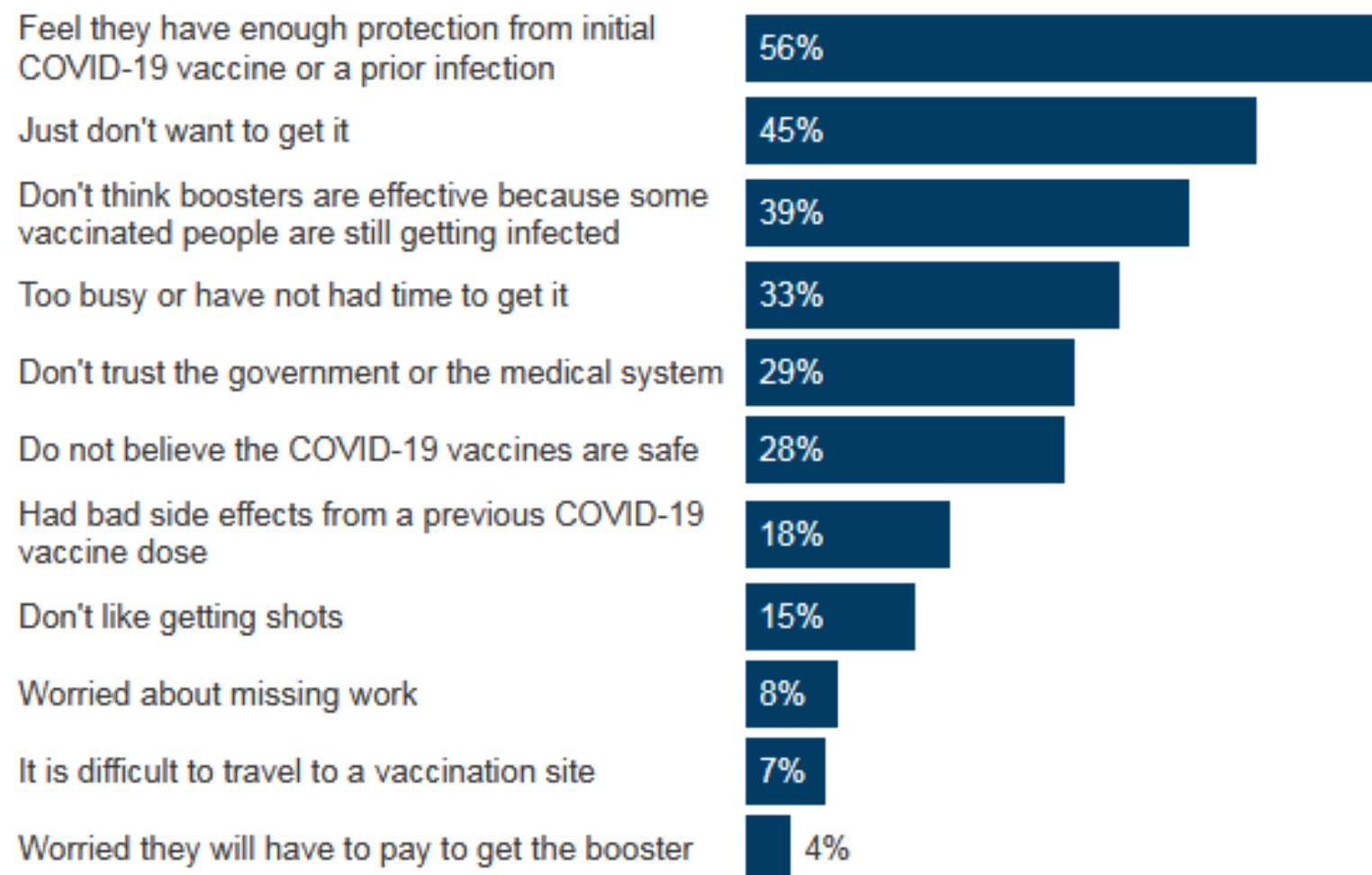
NOTE: See topline for full question wording.

SOURCE: KFF COVID-19 Vaccine Monitor (October 14-24, 2021)

**KFF COVID-19
Vaccine Monitor**

Feeling They Have Enough Protection And “Just Don’t Want To” Are Among Top Reasons For Not Getting A COVID-19 Booster

Percent who say...is a reason why they have not gotten a COVID-19 booster dose:



- Cross Sectional Study
- N= 1074
- Online (Dynata)
- National Representative

JOURNAL OF MEDICAL INTERNET RESEARCH

Resnicow et al

Original Paper

Novel Predictors of COVID-19 Protective Behaviors Among US Adults: Cross-sectional Survey

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NOVEL Predictors

Trait Reactance

We selected 5 items from the widely used Hong Reactance scale [19-23]. The scale measures trait reactance rather than reactance specific to COVID-19 recommendations. Each item was answered along a five-point continuum ranging from strongly disagree to strongly agree. Internal consistency in our sample was 0.87. The five items, averaged to create a mean scale, were:

1. I become angry when my freedom of choice is restricted.
2. Regulations trigger a sense of resistance in me.
3. When something is prohibited, I usually think, "That's exactly what I am going to do."
4. It disappoints me to see others submitting to society's standards and rules.
5. Advice and recommendations usually induce me to do just the opposite.

COVID-19 Conspiracy Beliefs

We developed a brief, three-item scale based on prior studies of COVID-19 and other health issues [7,14]. The scale is intended to measure conspiracy beliefs regarding COVID-19 rather than a generalized conspiracy trait or worldview [14]. Each item was answered along a five-point continuum ranging from definitely false to definitely true. Internal consistency in our sample was 0.74. The three items, averaged to create a mean scale, were:

1. The real truth about COVID-19 is being kept from the public.
2. People in power are using COVID-19 as an excuse to monitor and control the public.
3. The media is making COVID-19 seem more dangerous than it really is.

COVID-19 Apocalypse Beliefs

We developed a new brief scale informed by theological definitions and prior related work [15,17]. Each item was answered along a five-point continuum ranging from strongly disagree to strongly agree. Internal consistency in our sample was 0.92. The three items, averaged to create a mean scale, were:

1. The COVID-19 pandemic is a sign that the apocalypse is coming.
2. The COVID-19 pandemic is a sign that Jesus will soon be returning.
3. The COVID-19 pandemic is a sign that the rapture is



Outcomes

Adoption of Positive COVID-19 Protection Behaviors

We examined the frequency of five self-reported behaviors over the past week, all of which are recommended for reducing the risk of transmitting or acquiring COVID-19 [1]. For each item the responses were: rarely or never (coded 1), some of the time (coded 2), most of the time (coded 3), almost all of the time (coded 4), and all of the time (coded 5). The values of 1-5 for each item were summed to form an index score with a range of 5-25. The alpha value for the five behaviors was .84 in this sample.

1. Staying home as much as possible.
2. Wearing a mask or face covering when I go out of the house.
3. Staying at least 6 feet (about 3 steps) away from people I do not live with.
4. Avoiding gatherings or groups of other people.
5. Keeping my hands clean.



Outcomes

Table 2. Pearson correlations of novel predictors and COVID-19 outcomes (N=1074).

Variable	COVID-19 protective behaviors	Trips leaving home per week	COVID-19 knowledge score
Trait reactance	−0.38 ^a	0.31	−0.54
COVID-19 conspiracy beliefs	−0.32	0.21	−0.57
COVID-19 apocalypse beliefs	−0.09 ^b	0.27	−0.42

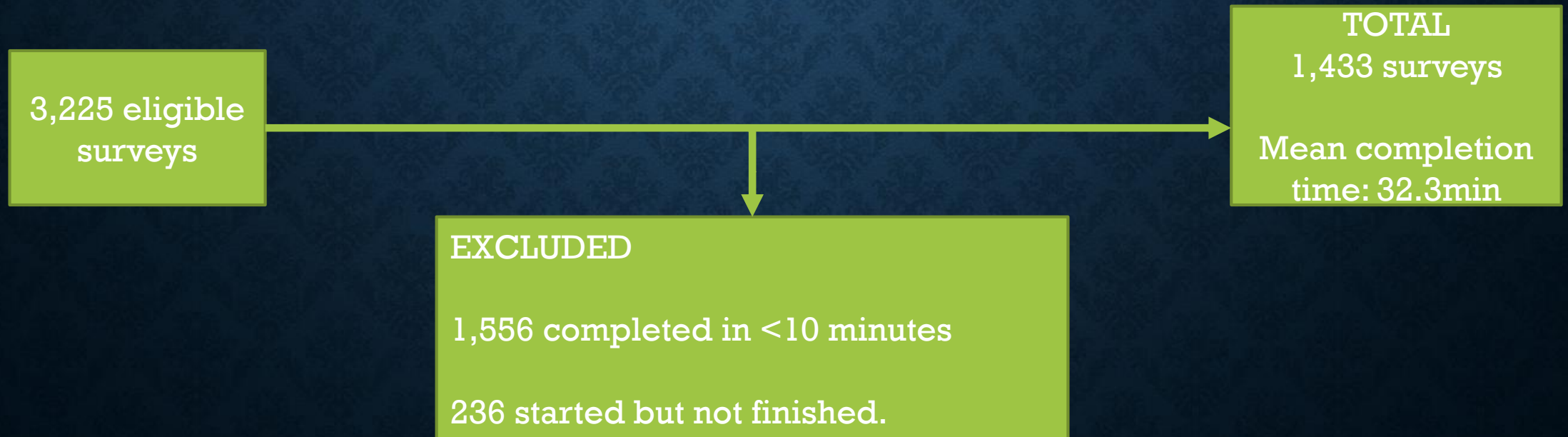
^aAll correlations were significant with a *P* of <.001, unless otherwise indicated.

^b*P*=.002



VACCINE STUDY DESCRIPTION

- Nationally representative sample of US adults
 - Age, gender, race, income, and US region
 - Rate of COVID-19 vaccination at the time
- Qualtrics survey sent to Dynata sample
- June 15-28, 2021



VACCINE STUDY SAMPLE DESCRIPTION

Age	N	%
35 and below	431	30.4
36-50	405	28.5
51-64	322	22.7
65+	261	18.4
Gender	N	%
Male	615	43.2
Female	804	56.5
Non-binary or genderqueer	5	0.4
Race	N	%
White	862	60.5
Black	202	14.2
Multi-racial	101	7.1
Hispanic	146	10.2
Other (includes American Indian, Asian, Other)	114	8.0

Income	N	%
Under \$30,000	414	29.1
\$30,000 - \$74,999	522	36.6
\$75,000 and above	489	34.3
Education	N	%
None through high school/GED	325	22.8
Post-Secondary (Trade School/Some college/Associates)	437	30.7
Bachelors	405	28.4
Advanced Degree (Masters, Doctoral/Professional)	257	18.0
Mean Age	46.8 (SD=17.04)	

VACCINATION STATUS

Vaccination Status	N	%
Vaccinated (Both doses of two dose, one dose of two dose, or one dose of one dose vaccine)	849	59.2
Unvaccinated - May get it (Get the vaccine as soon as you can; Wait and see; Only if required; Don't know when)	346	24.1
Unvaccinated - Hard no (Definitely not get the vaccine)	238	16.6

Reactance

I become angry when my freedom of choice is restricted.

Regulations trigger a sense of resistance in me.

When something is prohibited, I usually think, "That's exactly what I am going to do."

It disappoints me to see others submitting to society's standards and rules.

Advice and recommendations usually induce me to do just the opposite.

Gender Roles

How do you see yourself?

Completely masculine (1)

Mostly masculine (2)

Slightly masculine (3)

Slightly feminine (4)

Mostly feminine (5)

Completely feminine (6)

TRAITS

Dogmatism

I am a long way from reaching final conclusions about the central issues in life.

I am so sure I am right about the important things in life, there is no evidence that could convince me otherwise.

The people who disagree with me may well turn out to be right.

Twenty years from now, some of my opinions about the important things in life will probably have changed.

The things I believe in are so completely true I could never doubt them.

There are no discoveries or facts that could possibly make me change my mind about the things that matter most in life.

QAnon

A group of Satan-worshiping elites who run a child sex ring are trying to control our politics and media.

REACTANCE

MEASURING REACTANCE

- I become angry when my freedom of choice is restricted.
- Regulations trigger a sense of resistance in me.
- When something is prohibited, I usually think, “That’s exactly what I am going to do.”
- It disappoints me to see others submitting to society’s standards and rules.
- Advice and recommendations usually induce me to do just the opposite.

STRONGLY DISAGREE

1

STRONGLY AGREE

5

P < .001	Reactance
Vaccination Status	Mean
Vaccinated	2.6
Unvaccinated - May get it	2.6
Unvaccinated - Hard no	3.0

Model adjusted for: age, gender, race, income, education, political party, and Evangelicism.

DOGMATISM

DOGMATISM SCALE

How much do you agree or disagree with the following statements?

- I am a long way from reaching final conclusions about the central issues in life.
- I am so sure I am right about the important things in life, there is no evidence that could convince me otherwise.
- The people who disagree with me may well turn out to be right.
- Twenty years from now, some of my opinions about the important things in life will probably have changed.
- The things I believe in are so completely true I could never doubt them.
- There are no discoveries or facts that could possibly make me change my mind about the things that matter most in life.

Strongly disagree (1) – Strongly agree (7)

Higher score = More dogmatic

Range: 1 – 7

P < .001		Dogmatism Scale Score
Vaccine Status		Mean
Vaccinated		3.9
Unvaccinated - May get it		4.1
Unvaccinated - Hard no		4.6

Model adjusted for: age, gender, race, income, education, political party, and Evangelicism.

POLITICAL BELIEFS

Below are things that some people might believe. Please indicate whether you personally think each statement is true or false. Scoring: False = 0, Unsure = 1, and True = 2

Trump Election Belief Score Higher score = Higher belief that in the 2020 US Presidential Election: <ul style="list-style-type: none">• Donald Trump actually received more legally valid votes than Joseph Biden.• There was so much voter fraud that we don't really know who won the election. <i>Range: 0-4</i> P < .001	
Vaccine Status	Mean
Vaccinated	1.2
Unvaccinated - May get it	1.7
Unvaccinated - Hard no	2.3

Model adjusted for: age, gender, race, income, education, political party, and Evangelicalism.

QANON BELIEFS

A group of Satan-worshiping elites who run a child sex ring are trying to control our politics and media.

Below are things that some people might believe. Please indicate whether you personally think each statement is true or false.

P < .001		A group of Satan-worshiping elites who run a child sex ring are trying to control our politics and media.		
Vaccine Status	n	True	False	Unsure
Vaccinated	840	122	568	150
		12.6%	69.2%	18.2%
Unvaccinated - May get it	345	60	146	139
		17.2%	42.3%	40.5%
Unvaccinated - Hard no	238	70	72	96
		30.2%	31.1%	38.7%

There are different views on the relationship between religious beliefs and COVID-19. How much do you agree or disagree with the following statements? Please answer even if you're not religious.

P < .001		The COVID-19 vaccine is “the mark of the Beast.”				
Vaccine Status		Strongly disagree % (n)	Disagree % (n)	Neither agree nor disagree % (n)	Agree % (n)	Strongly agree % (n)
Vaccinated		418	126	163	58	73
		49.9%	15.0%	19.5%	6.9%	8.7%
Unvaccinated - May get it		94	71	118	39	24
		27.2%	20.5%	34.1%	11.3%	6.9%
Unvaccinated - Hard no		74	24	89	14	36
		31.2%	10.1%	37.6%	5.9%	15.2%

There are different views on the relationship between religious beliefs and COVID-19. How much do you agree or disagree with the following statements? Please answer even if you're not religious.

P < .001		I don't need the COVID-19 vaccine because God will protect me.				
Vaccine Status		Strongly disagree % (n)	Disagree % (n)	Neither agree nor disagree % (n)	Agree % (n)	Strongly agree % (n)
Vaccinated		422	140	145	71	61
		50.3%	16.7%	17.3%	8.5%	7.3%
Unvaccinated - May get it		71	81	105	54	34
		20.6%	23.5%	30.4%	15.7%	9.9%
Unvaccinated - Hard no		56	24	87	23	47
		23.6%	10.1%	36.7%	9.7%	19.8%

Rapture Beliefs

There are different views on the relationship between religious beliefs and COVID-19. How much do you agree or disagree with the following statements? Please answer even if you're not religious.

Rapture Belief Score

Higher score = Higher belief that:

- **The COVID-19 pandemic is a sign that the apocalypse is coming.**
- **The COVID-19 pandemic is a sign that Jesus will soon be returning.**
- **The COVID-19 pandemic is a sign that the rapture is coming.**

Range: 1-5

P < .001

Vaccine Status	Mean
Vaccinated	2.47
Unvaccinated - May get it	2.60
Unvaccinated - Hard no	2.78

P < .001		How would you describe your religious views?					
Vaccine Status	1 Very traditional	2	3	4	5	6	7 Very progressive
Vaccinated	95	68	75	110	91	68	135
	11.3%	8.1%	8.9%	13.1%	10.8%	8.1%	16.1%
Unvaccinated - May get it	53	32	34	53	43	30	46
	15.3%	9.2%	9.8%	15.3%	12.4%	8.7%	13.3%
Unvaccinated - Hard no	61	20	22	36	18	10	11
	25.6%	8.4%	9.2%	15.1%	7.6%	4.2%	4.6%

COVID-19 CONSPIRACY BELIEFS

CONSPIRACY BELIEFS

1. The government is misleading the public about the cause of the virus
2. I'm skeptical about the official explanation about the cause of the virus
3. I don't trust the information about the virus from scientific experts.
4. The virus is manmade.
5. The number of cases and deaths from COVID-19 is being greatly exaggerated
6. Bill Gates has put microchips into the COVID-19 vaccine to track people.
7. This spread of the virus is a deliberate attempt by a group of powerful people to gain advantage or control.
8. The virus leaked from a lab in Wuhan, China.
9. The real truth about COVID-19 is being kept from the public.
10. People in power are using COVID-19 as an excuse to monitor and control the public.
11. The media is making COVID-19 seem more dangerous than it really is.

COVID-19 CONSPIRACY BELIEFS: 11-ITEM SCALE

P < .001	Conspiracy Beliefs		
Vaccine Status	Mean	N	Std. Dev.
Vaccinated	2.50	840	0.9
Unvaccinated - May get it	2.83	346	0.6
Unvaccinated - Hard no	3.59	238	0.8

Higher score = Higher Conspiracy

INDIVIDUAL CONSPIRACY ITEMS

Below are things that some people might believe about COVID-19 and the virus that causes it. Please indicate how much you personally agree with each statement.

P < .001		The number of cases and deaths from COVID-19 is being greatly exaggerated.			
Vaccine Status	Do not agree	Agree a little	Agree moderately	Agree a lot	Agree completely
Vaccinated	441	92	92	100	115
	52.5%	11.0%	11.0%	11.9%	13.7%
Unvaccinated - May get it	105	61	89	48	43
	30.3%	17.6%	25.7%	13.9%	12.4%
Unvaccinated - Hard no	45	25	39	27	101
	19.0%	10.5%	16.5%	11.4%	42.6%

Below are things that some people might believe about COVID-19 and the virus that causes it. Please indicate how much you personally agree with each statement.

P < .001		Bill Gates has put microchips into the COVID-19 vaccine to track people.			
Vaccine Status	Do not agree	Agree a little	Agree moderately	Agree a lot	Agree completely
Vaccinated	559	55	71	73	82
	66.5%	6.5%	8.5%	8.7%	9.8%
Unvaccinated - May get it	168	55	62	44	17
	48.6%	15.9%	17.9%	12.7%	4.9%
Unvaccinated - Hard no	106	28	42	23	38
	44.7%	11.8%	17.7%	9.7%	16.0%

Below are things that some people might believe about COVID-19 and the virus that causes it. Please indicate how much you personally agree with each statement.

P < .001		This spread of the virus is a deliberate attempt by a group of powerful people to gain advantage or control.			
Vaccine Status	Do not agree	Agree a little	Agree moderately	Agree a lot	Agree completely
Vaccinated	438	97	87	104	114
	52.1%	11.5%	10.4%	12.4%	13.6%
Unvaccinated - May get it	98	66	77	66	39
	28.3%	19.1%	22.3%	19.1%	11.3%
Unvaccinated - Hard no	50	21	50	26	91
	21.0%	8.8%	21.0%	10.9%	38.2%

COVID-19 VACCINE MYTH ITEMS

Do you believe the following statements about the COVID-19 vaccine are true or false or are you unsure?

Response Options: True; False; Unsure

- The COVID-19 vaccines contain fetal cells.
- The COVID-19 vaccines have been shown to cause infertility.
- The COVID-19 vaccines can change your DNA.
- You should not get the vaccine if you have already had COVID-19.
- You can get COVID-19 from the vaccine.

Higher score = Higher belief in COVID vaccine myths

Range: 0 – 5

P < .001		Vaccine Myth Index Score
Vaccine Status		Mean
Vaccinated		2.0
Unvaccinated - May get it		3.5
Unvaccinated - Hard no		4.0

VACCINE HESITANCE PSYCHO-SEGMENTS

- **Pragmatic Concerns/ASAP**

- **No Time/No Place/Inconvenient**
- Lower Income
- Hourly Workers

- **Wait and See/Not First/Not Us**

- African Americans
- You go First/Don't experiment on us
- Were we involved in the trials?



Hard No/Ideologue

- **Demographic**

- White, Male, Rural, Pro-Trump Republican, Lower Education, Younger

- **Personality**

- Paranoia
- Reactance
- Dogmatism
- Conspiracy
- End of Times
- Conservative



- Values Concordant

- Aligns with Autonomy/Personal Freedom
- Resistance to Contradictory Information
- Anti-Science/Anti Vax/Anti Pharm
- Covid policy = Oppression
- Stick it to the Libs/Masks-Vaccines are for the weak

COMMUNICATION STRATEGY BY SEGMENT

- **Pragmatic Concerns/ASAP**

- ✓ *Free and Convenient Injection*

- ✓ *Safety*

- ✓ *You won't miss work*

- **Wait and See/Not First/Not Us**

- ✓ *Acknowledge Historical Racism*

- ✓ *Time and Information from Trusted Sources*

Hard No/Ideologue

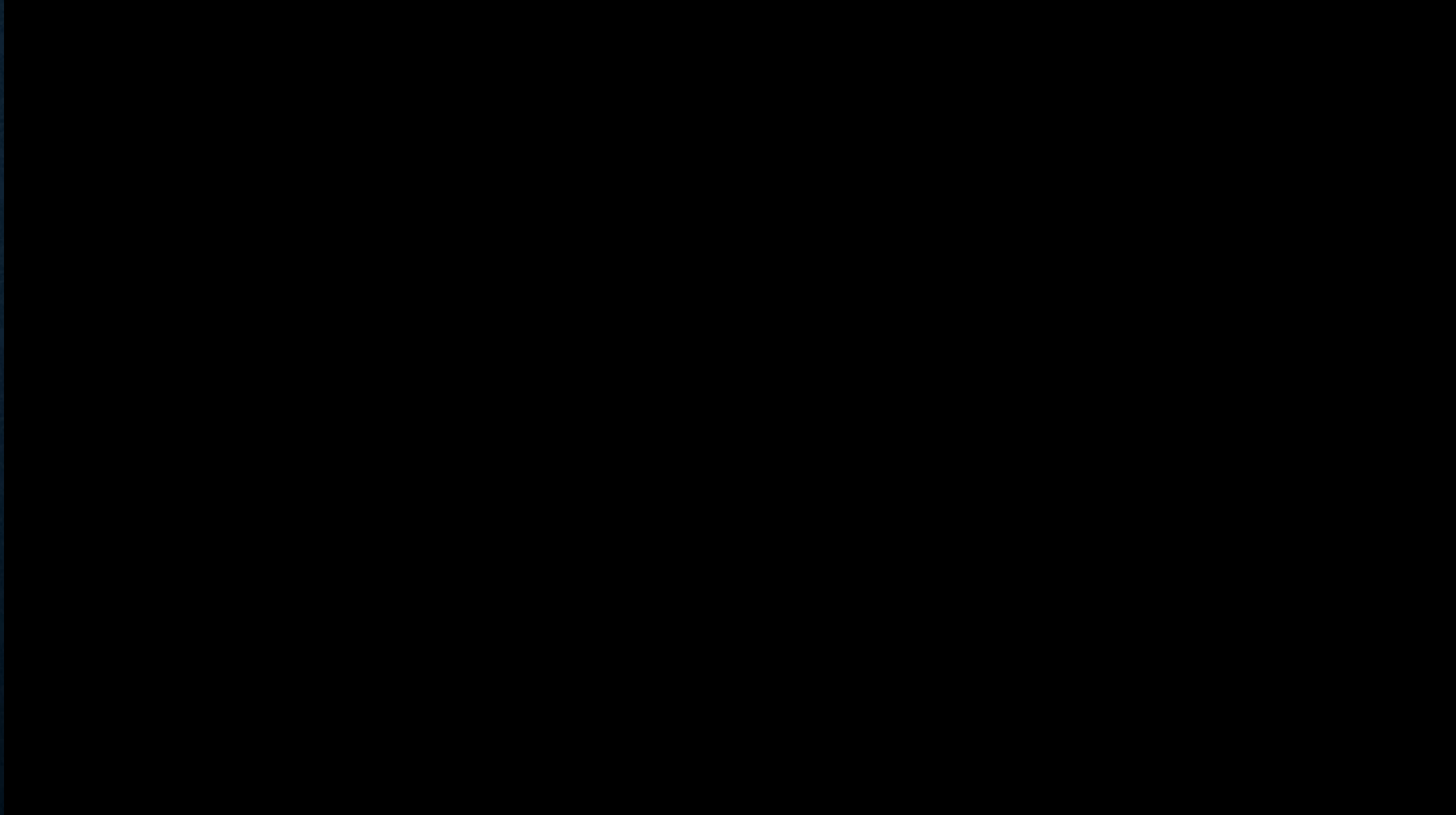
- ✓ *AFFIRMATION/ROLL w RESISTANCE*

- ✓ *Information/Counterarguing unlikely to impact*

- ✓ *Raise Doubt/ Fox News vaccinated/Being played*

- ✓ *Religious/Conservative/Anti-Lib Sources*

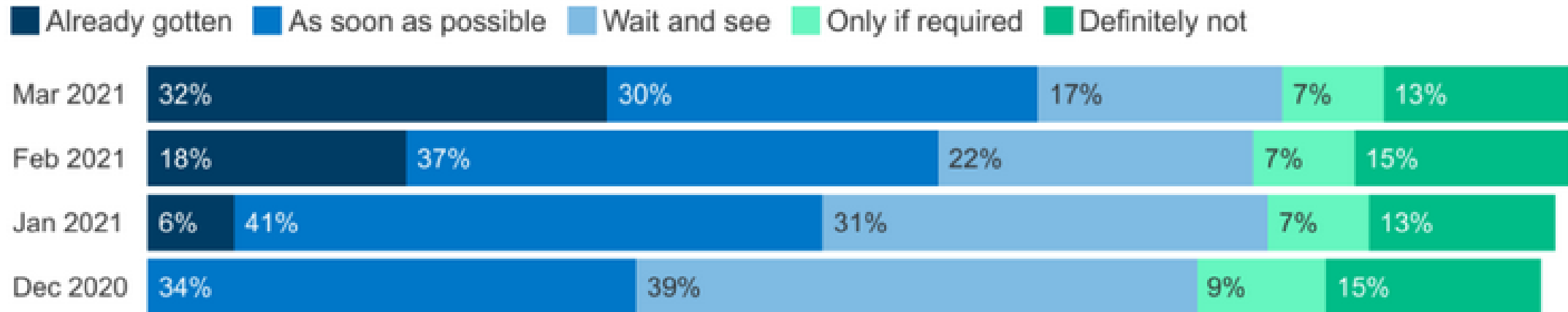
REFLECTION-AFFIRMATION-ASK TELL ASK



TRUSTED SOURCE

JUNK

WAIT AND SEE SHRINKING



Thinking about your child's risk of exposure to COVID-19, do you think your child is...when they are at school?

■ Very safe ■ Somewhat safe ■ Not too safe ■ Not at all safe



Race/Ethnicity

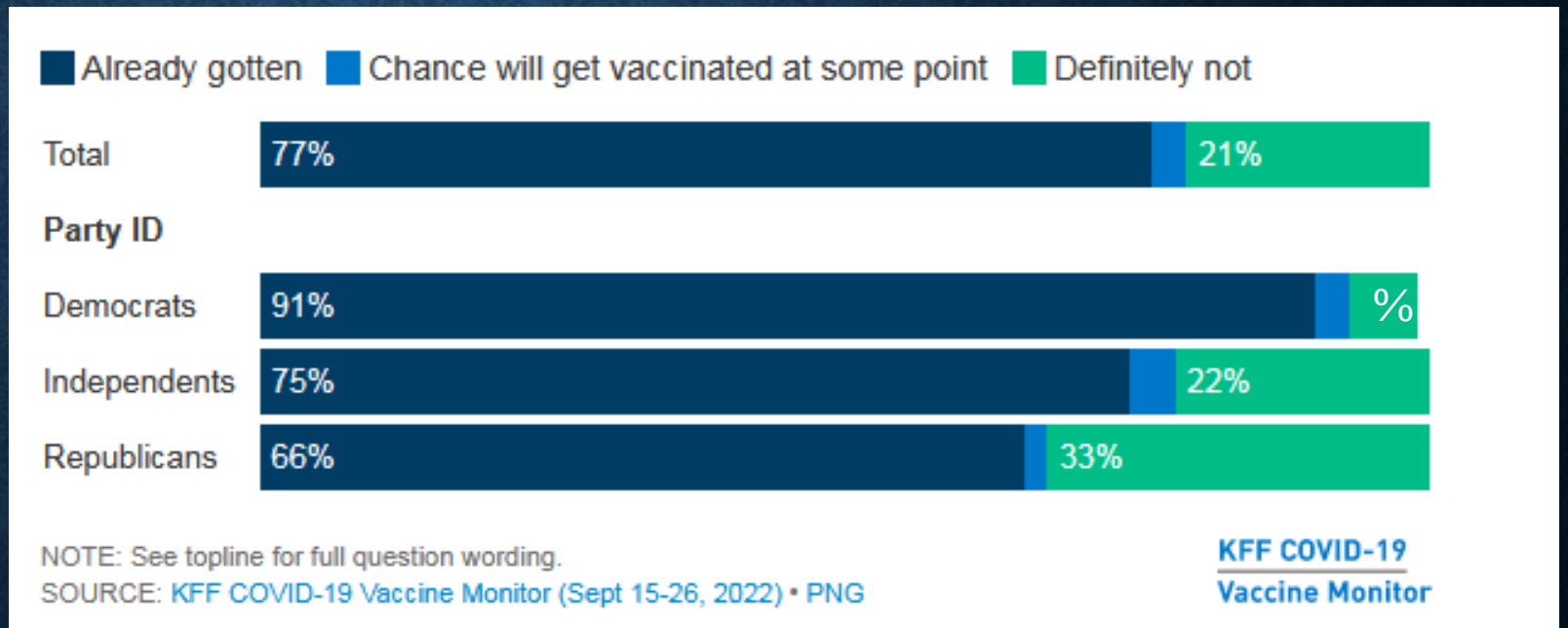


NOTE: Asked of parents or guardians of a child ages 5-17 who are enrolled in school. See topline for full question wording.

SOURCE: KFF COVID-19 Vaccine Monitor (April 13-26, 2022) • PNG

KFF COVID-19
Vaccine Monitor

PARTY AND HESITANCE



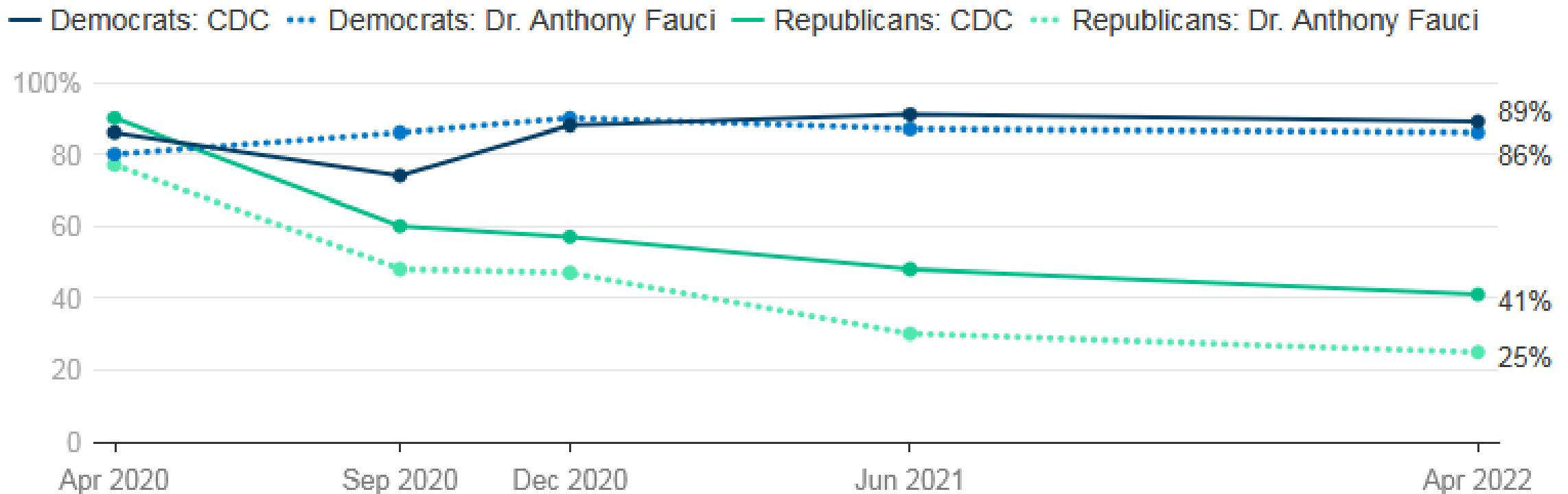
SOURCE: KFF COVID-19 Vaccine Monitor (September 15-26, 2022)

Won't Get it= Is there a chance you will get vaccinated for COVID-19 at some point, or will ***you definitely not get vaccinated?***"

Vaccinated = at least one dose of a COVID-19 vaccine

Trust in CDC and Dr. Fauci by Political Party; 2020-2022

Percent who say they have a **great deal** or a **fair amount** of trust in each of the following to provide reliable information on the coronavirus/COVID-19 vaccines:



COVID-19 Vaccination Intent, Perceptions, and Reasons for Not Vaccinating Among Groups Prioritized for Early Vaccination — United States, September and December 2020

Kimberly H. Nguyen, DrPH¹; Anup Srivastav, PhD²; Hilda Razzaghi, PhD¹; Walter Williams, MD¹; Megan C. Lindley, MPH¹; Cynthia Jorgensen, DrPH¹; Neetu Abad, PhD³; James A. Singleton, PhD¹

TABLE 3. Main reasons for not intending to get COVID-19 vaccine,* United States, September and December 2020

Main reasons	Weighted % (95% CI)		
	IPSOS, Sep 2020 [†] (n = 3,541)	Average of Dec IPSOS [§] and NORC [¶] estimates (n = 2,033)	Difference between Dec and Sep estimates**
Concern about the side effects and safety of the vaccine	23.4 (20.9 to 25.9)	29.8 (26.2 to 33.4)	6.4 (2.0 to 10.8)
Concern that the vaccine is being developed too quickly	21.6 (19.3 to 24.1)	10.4 (7.6 to 13.2)	−11.2 (−14.9 to −7.5)
Plan to wait and see if it is safe and may get it later	18.0 (15.7 to 20.2)	14.5 (11.1 to 17.9)	−3.5 (−7.6 to 0.6)
Don't trust the government	9.8 (8.0 to 11.6)	12.5 (9.0 to 15.9)	2.7 (−1.2 to 6.6)
Plan to use masks/other precautions instead	3.4 (2.4 to 4.4)	3.7 (1.4 to 6.0)	0.3 (−2.2 to 2.8)
Don't like vaccines	3.2 (2.2 to 4.1)	5.4 (3.0 to 7.9)	2.2 (−0.4 to 4.8)
Not a member of any group that is at high risk for COVID-19	2.8 (1.9 to 3.8)	3.5 (1.8 to 5.1)	0.7 (−1.2 to 2.6)
COVID-19 is not a serious illness	2.6 (1.6 to 3.6)	1.9 (0.8 to 3.0)	−0.7 (−2.2 to 0.8)
The vaccine will not work	2.4 (1.5 to 3.3)	0.0 (—)	−2.4 (−3.3 to −1.5)
The vaccine could give me COVID-19	2.4 (1.5 to 3.3)	2.3 (0.0 to 5.4)	−0.1 (−2.9 to 2.7)
Had COVID-19 and should be immune	1.0 (0.4 to 1.6)	2.2 (1.0 to 3.5)	1.2 (−0.2 to 2.6)
Don't like needles	1.0 (0.5 to 1.6)	3.0 (0.1 to 6.0)	2.0 (−1.0 to 5.0)
Doctor has not recommended a COVID-19 vaccine to me	0.8 (0.4 to 1.4)	0.0 (—)	−0.8 (−1.3 to −0.3)
Didn't know I needed a vaccine against COVID-19	0.2 (0.0 to 0.5)	0.4 (0.0 to 1.0)	0.2 (−0.4 to 0.8)
Concern about the costs associated with the vaccine (such as office visit costs or vaccine administration fees)	0.2 (0.0 to 0.3)	0.2 (0.0 to 0.8)	0.0 (−0.4 to 0.4)

Among those who want to "wait and see," percent who say they are more likely to get the COVID-19 vaccine if they heard each of the following:

The vaccines are nearly 100% effective at preventing hospitalization and death from COVID-19

66%

Although the COVID-19 vaccines themselves are new, scientists have been working on the technology used in these vaccines for 20 years

49%

More than 100,000 people from diverse backgrounds and ethnicities participated in the vaccine trials

43%

The vast majority of doctors who have been offered the vaccine have taken it

43%

There is no cost to get the COVID-19 vaccine

41%

Below are things that some people might believe. Please indicate whether you personally think each statement is true or false.

P < .001	The real truth about COVID-19 is being kept from the public.				
Vaccine Status	Definitely false	Probably false	Unsure	Probably true	Definitely true
Vaccinated	246	143	193	153	105
	29.3%	17.0%	23.0%	18.2%	12.5%
Unvaccinated - May get it	29	43	120	99	54
	8.4%	12.5%	34.8%	28.7%	15.7%
Unvaccinated - Hard no	10	12	64	36	116
	4.2%	5.0%	26.9%	15.1%	48.7%

Below are things that some people might believe. Please indicate whether you personally think each statement is true or false.

P < .001	People in power are using COVID-19 as an excuse to monitor and control the public.				
Vaccine Status	Definitely false	Probably false	Unsure	Probably true	Definitely true
Vaccinated	277	139	157	142	125
	33.0%	16.5%	18.7%	16.9%	14.9%
Unvaccinated - May get it	40	46	112	93	54
	11.6%	13.3%	32.5%	27.0%	15.7%
Unvaccinated - Hard no	12	16	68	46	96
	5.0%	6.7%	28.6%	19.3%	40.3%

Below are things that some people might believe about COVID-19 and the virus that causes it. Please indicate how much you personally agree with each statement.

P < .001		The virus leaked from a lab in Wuhan, China.			
Vaccine Status	Do not agree	Agree a little	Agree moderately	Agree a lot	Agree completely
Vaccinated	168	184	149	158	181
	20.0%	21.9%	17.7%	18.8%	21.5%
Unvaccinated - May get it	50	64	70	78	84
	14.5%	18.5%	20.2%	22.5%	24.3%
Unvaccinated - Hard no	38	22	55	25	98
	16.0%	9.2%	23.1%	10.5%	41.2%

Below are things that some people might believe. Please indicate whether you personally think each statement is true or false.

P < .001		The media is making COVID-19 seem more dangerous than it really is.			
Vaccine Status	Definitely false	Probably false	Unsure	Probably true	Definitely true
Vaccinated	298	130	155	139	118
	35.5%	15.5%	18.5%	16.5%	14.0%
Unvaccinated - May get it	46	46	94	104	56
	13.3%	13.3%	27.2%	30.1%	16.2%
Unvaccinated - Hard no	25	18	66	40	88
	10.5%	7.6%	27.8%	16.9%	37.1%

VACCINATION BELIEFS

VAX SCALE ITEMS

The following statements are about vaccines in general, NOT specifically about the COVID-19 vaccine. Please tell us how much you disagree or agree with the following statements about vaccines in general.

Response Options: 5-point Likert scale Strongly disagree (1) – Strongly agree (5)

- I feel safe after being vaccinated.
- Although most vaccines appear to be safe, there may be problems that we have not yet discovered.
- Vaccination programs are a big con.
- Natural exposure to viruses and germs gives the safest protection.
- I avoid vaccines because I don't like needles or getting a shot. (*created de novo*)

Martin LR, PhD, Petrie KJ, PhD. Understanding the Dimensions of Anti-Vaccination Attitudes: the Vaccination Attitudes Examination (VAX) Scale. *Annals of Behavioral Medicine*; 2017. p. 652-60.

P < .001	VAX Scale Mean Score		
Vaccine Status	Mean	N	Std. Dev.
Vaccinated	2.6	840	0.8
Unvaccinated - May get it	3.1	346	0.6
Unvaccinated - Hard no	3.7	238	0.8

Higher score = More anti-vax attitude

Higher score = More progressive views

Excluded those who responded “I’m not religious.”

P < .001		How would you describe your religious views?
Vaccine Status		Mean
Vaccinated		4.21
Unvaccinated - May get it		3.95
Unvaccinated - Hard no		3.02

Outcomes

Table 3. Bivariate and adjusted means of COVID-19 protective behaviors, leaving home episodes, and COVID-19 knowledge by novel predictors (N=1074).

Variable	COVID-19 protective behaviors				Trips leaving home per week				COVID-19 knowledge score			
	Bivariate unadjusted, mean (SD)	<i>P</i> value	Adjusted ^a , mean (SE)	<i>P</i> value	Bivariate unadjusted, mean (SD)	<i>P</i> value	Adjusted, mean (SE)	<i>P</i> value	Bivariate unadjusted, mean (SD)	<i>P</i> value	Adjusted, mean (SE)	<i>P</i> value
Trait reactance		<.001		<.001		<.001		<.001		<.001		<.001
Low ^b	21.4 (3.8)		20.9 (0.18)		5.2 (5.2)		5.9 (0.25)		28.9 (4.7)		27.8 (0.17)	
High ^c	18.2 (5.0)		18.9 (0.22)		8.5 (7.9)		7.3 (0.30)		23.9 (4.8)		25.4 (0.20)	
Conspiracy beliefs		<.001		<.001		<.001		.02		<.001		<.001
Low	21.5 (3.8)		20.9 (0.21)		5.1 (5.4)		6.0 (0.28)		29.8 (4.7)		28.7 (0.19)	
High	18.9 (4.9)		19.4 (0.19)		7.9 (7.4)		6.9 (0.26)		24.2 (4.4)		25.2 (0.18)	
Apocalypse beliefs		<.001		.89		<.001		.004		<.001		<.001
Low	20.6 (4.4)		20.1 (0.19)		5.1 (5.0)		5.9 (0.26)		28.8 (4.8)		27.6 (0.18)	
High	19.5 (4.8)		20.1 (0.21)		8.4 (7.8)		7.1 (0.29)		24.5 (5.0)		25.9 (0.20)	
Political party		<.001		<.001		.19		.01		<.001		<.001
Republican	19.3 (4.9)		19.5 (0.26)		7.1 (6.8)		7.2 (0.35)		25.4 (5.1)		26.0 (0.24)	
Democrat	21.3 (3.8)		21.0 (0.22)		6.5 (6.9)		6.4 (0.30)		28.1 (5.5)		27.4 (0.21)	
Independent	19.6 (4.9)		19.8 (0.25)		6.4 (6.5)		6.1 (0.34)		26.8 (5.1)		27.0 (0.23)	
Something else	19.0 (5.2)		19.2 (0.54)		5.3 (4.1)		4.7 (0.74)		25.6 (4.4)		26.6 (0.50)	

P < .001	Would you describe yourself as a "born-again" or evangelical Christian, or not?		
Vaccine Status	No, not born again or Evangelical	Yes, born again or Evangelical	Don't know
Vaccinated	515	259	65
	61.4%	30.9%	7.7%
Unvaccinated - May get it	149	133	64
	43.1%	38.4%	18.5%
Unvaccinated - Hard no	118	80	40
	49.6%	33.6%	16.8%

P < .001		Political Affiliation		
Vaccine Status		Republican	Democrat	Independent or Something Else
Vaccinated		204	413	224
		24.3%	49.1%	26.6%
Unvaccinated - May get it		72	142	132
		20.8%	41.0%	38.2%
Unvaccinated - Hard no		81	50	106
		34.2%	21.1%	44.7%

A group of Satan-worshiping elites who run a child sex ring are trying to control our politics and media.

P < .001	% TRUE/UNSURE
Vaccine Status	Mean
Vaccinated	31%
Unvaccinated - May get it	58%
Unvaccinated - Hard no	69%

Model adjusted for: age, gender, race, income, education, political party, and Evangelicism.

There are different views on the relationship between religious beliefs and COVID-19. How much do you agree or disagree with the following statements? Please answer even if you’re not religious.

P < .001		Prayer will protect me from COVID-19.			
Vaccine Status	Strongly disagree % (n)	Disagree % (n)	Neither agree nor disagree % (n)	Agree % (n)	Strongly agree % (n)
Vaccinated	252	130	199	145	112
	30.1%	15.5%	23.7%	17.3%	13.4%
Unvaccinated - May get it	50	53	110	80	53
	14.5%	15.3%	31.8%	23.1%	15.3%
Unvaccinated - Hard no	47	16	82	36	55
	19.9%	6.8%	34.7%	15.3%	23.3%

There are different views on the relationship between religious beliefs and COVID-19. How much do you agree or disagree with the following statements? Please answer even if you’re not religious.

P < .001		God will save us from COVID-19.			
Vaccine Status	Strongly disagree % (n)	Disagree % (n)	Neither agree nor disagree % (n)	Agree % (n)	Strongly agree % (n)
Vaccinated	232	116	228	131	132
	27.7%	13.8%	27.2%	15.6%	15.7%
Unvaccinated - May get it	46	45	109	86	58
	13.4%	13.1%	31.7%	25.0%	16.9%
Unvaccinated - Hard no	47	16	89	28	57
	19.8%	6.8%	37.6%	11.8%	24.1%

TRADITIONAL GENDER ROLES SCALE

People can have a combination of masculine and feminine traits, which may or may not correspond with whether they are male or female.

How do you see yourself? Would you say that you see yourself as:

- Completely masculine (1) (MALE TRADITIONAL)
- Mostly masculine (2)
- Slightly masculine (3)
- Slightly feminine (4)
- Mostly feminine (5)
- Completely feminine (6) (FEMALE TRADITIONAL)
- RECODED SO HIGHER IS MORE TRADITIONAL

TRADITIONAL GENDER ROLE

**Identification with
Traditional Gender Role**

Range: 1 – 6

Higher = More traditional

p < .01

Vaccinated (≥ 1 dose) 5.33

Unvaccinated - May get it 5.56

Unvaccinated - Hard No 5.53

1. The government is misleading the public about the cause of the virus
2. I'm skeptical about the official explanation about the cause of the virus
3. I don't trust the information about the virus from scientific experts.
4. The virus is manmade.
5. The number of cases and deaths from COVID-19 is being greatly exaggerated
6. Bill Gates has put microchips into the COVID-19 vaccine to track people.
7. This spread of the virus is a deliberate attempt by a group of powerful people to gain advantage or control.
8. The virus leaked from a lab in Wuhan, China.

Do not agree (1), Agree a little (2), Agree moderately (3), Agree a lot (4) Agree completely (5)

1. The real truth about COVID-19 is being kept from the public.
2. People in power are using COVID-19 as an excuse to monitor and control the public.
3. The media is making COVID-19 seem more dangerous than it really is.

Definitely false(1), Probably false (2), Unsure (3), Probably true (4), Definitely true(5)

HEALTHCARE SYSTEM DISTRUST

HEALTH CARE SYSTEM DISTRUST ITEMS

Response Options: 5-point Likert scale Strongly disagree (1) – Strongly agree (5)

1. The Health Care System does its best to make patients' health better.
2. The Health Care System covers up its mistakes.
3. Patients receive high quality medical care from the Health Care System.
4. The Health Care System makes too many mistakes.
5. The Health Care System puts making money above patients' needs.
6. The Health Care System gives excellent medical care.
7. Patients get the same medical treatment from the Health Care System, no matter what the patient's race or ethnicity.
8. The Health Care System lies to make money.
9. The Health Care System experiments on patients without them knowing.

Higher score = Higher distrust

P < .001		Overall score (Range: 9-45)
Vaccine Status		Mean
Vaccinated		23.4
Unvaccinated - May get it		26.3
Unvaccinated - Hard no		29.6

Satisfaction Poll & Upcoming Events

Upcoming Learning Events:

Register NOW:

- November 30th, 12–1 pm ET: [Winning Proposals to Sustain Your Health Equity Work](#)
- *Understanding and Addressing Vaccine Confidence Series:*
 - December 9th, 2:30 –3:30 pm ET: [Motivational Interviewing: What Is It and Why Should My Vaccine Equity Program Consider It?](#)
 - January 2023: Interactive Workshops: Those Difficult Conversations: Practicing Motivational Interviewing Strategies (English)/Esas Conversaciones Difíciles: Practicando Estrategias de Entrevistas Motivacionales (Español) – registration coming soon

Full events calendar available on our website:

vaccineequity.urban.org

Partnering for **Vaccine Equity**

