Social and Cultural Issues that Influence Vaccine Acceptance

And exaggerated expectations with respect to returning to life as usual

To be updated periodically: Updated 06/09/2021

Mark Nichter, PhD, MPH¹, Collin Catalfamo, MPH², Amy Lind, MPH²

¹ School of Anthropology, The University of Arizona
² Mel and Enid Zuckerman College of Public Health, The University of Arizona



Vaccine issues that will need to be faced sooner rather than later

Common Reasons for Vaccine Hesitancy

- Little trust in the governmental agencies which declare it safe
 - Conspiracy theories abound
- "Rushed vaccine has not proven safe –I will wait"
- Concern about potential side effects
- "Vaccine acquired immunity is not as efficacious as infection acquired immunity"
- "Disease is no big deal for people like me, vaccine is an additional risk"
- "Vaccine against my belief system"

Exaggerated Expectations for COVID-19 Vaccines

- "Once a vaccine is introduced the public will no longer have to wear masks or social distance within a few months"
- "Herd immunity will be reached very quickly"
- "The vaccine will prevent all cases of COVID-19"
- "The vaccine will provide lifetime immunity"



What factors lead to vaccine hesitancy

• Trust and safety are the two major issues given the amount of mis- and disinformation circulating in our highly networked society

<u>Trust</u>

- Distrust in the motives of vaccine manufacturers
- Distrust in the federal agencies responsible for regulating the vaccine industry and the fast-track warp speed imperative of the government
- Distrust in public health experts promoting vaccination
- Other vaccines that have been controversial and promoted by the same public health stakeholders

<u>Safety</u>

- Short –term and long- term side effects
- How long will it take to know if there are side effects
- Safety concerns for the very young and old
- Differences in opinion about the relative effectiveness of "natural" vs vaccine acquired immunity and disease "resistance"



Vaccine skepticism and suspicion are major challenges in reaching herd immunity

- The ability to reach 70-80% herd immunity to control COVID-19 is undermined by both:
 - Skepticism about medical authority and expertise. This has been more common among Trump supporters even though the president has been promoting vaccines as the soon coming magic bullet. This is paradoxical.
 - Suspicion that the administration is cutting corners on safety to rush thru a vaccine for political reasons (more common among Democrats).



US Vaccine Surveys

Older and more recent surveys to show change over time





The AP-NORC Survey, May 2020

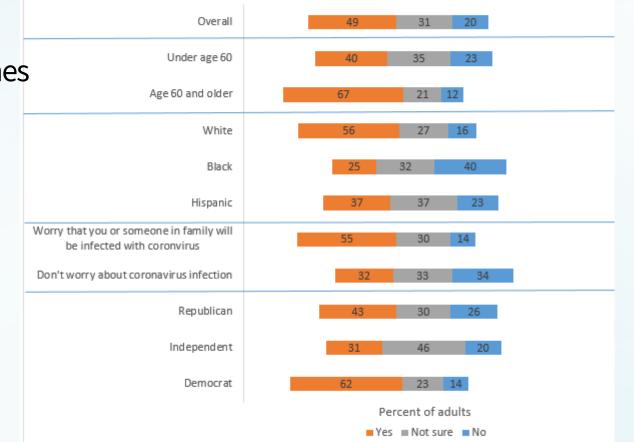
The Associated Press-NORC Center for Public Affairs Research



AP Poll, May 2020

- If a vaccine against coronavirus becomes available to the public:
 - 49% say they plan to get vaccinated
 - 20% say they will not.
 - Another 31% are not sure.

Do you plan to get vaccinated against coronavirus?

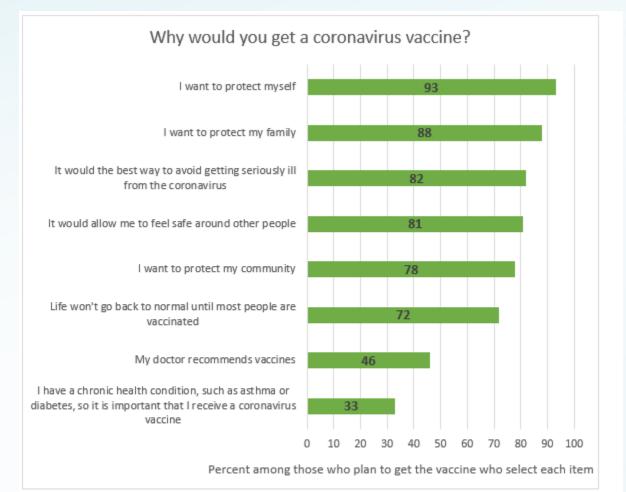


Question: If a vaccine against the coronavirus becomes available, do you plan to get vaccinated, or not? Source: AP-NORC Poll conducted May 14-18, 2020 with 1,056 adults



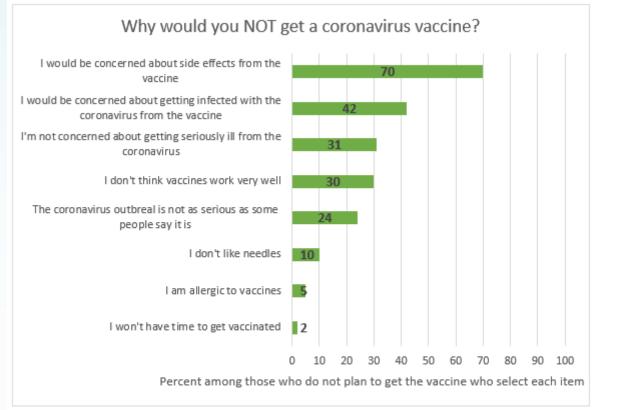
Coordinating Community Support for Healthcare Workers and Families

ΕD



Question: ASKED OF THOSE WHO SAY THEY WOULD GET VACCINATED: Which of the following are reasons you would get a coronavirus vaccine? Select all that apply. Source: AP-NORC Poll conducted May 14-18, 2020 with 1,056 adults





Question: ASKED OF THOSE WHO SAY THEY WOULD NOT GET VACCINATED: Which of the following are reasons you would not get a coronavirus vaccine? Select all that apply. Source: AP-NORC Poll conducted May 14-18, 2020 with 1,056 adults



Newsweek survey, June 2020 How many Americans would be willing to take a COVID-19 vaccine?

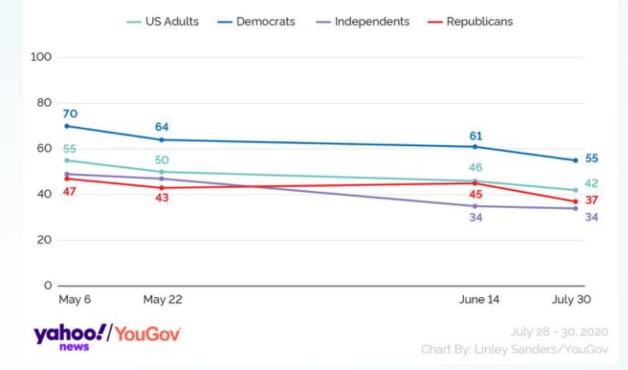
- 30% of respondents agreed with the conspiratorial sentiment that "the dangers of vaccines are being hidden by the medical establishment."
 - Agreement with the statement varied by race and ethnicity: 25% of white people agreed compared with 29% of Latinos and 49% of Black people.
 - 25% of respondents agreed with the statement "the coronavirus is being used to force a dangerous and unnecessary vaccine on Americans." Only 22% of white people and Latinos agreed while 42% of Black people did.
- "If a vaccine for COVID-19 becomes available, would you be willing to take it?"
 - Nearly two-thirds of respondents indicated they would be willing to take it.
 - But race and ethnicity mattered: While 70% of white people agreed, only 62% of Latinos and 44% of Black people did.



Willingness of Americans to become vaccinated

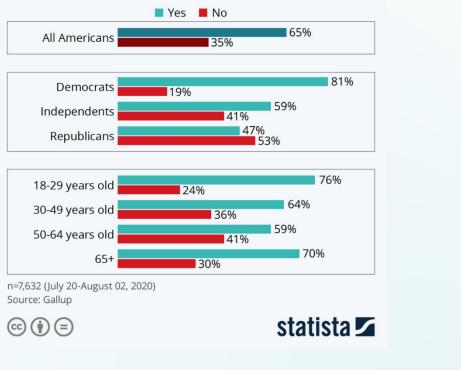
Since May, fewer Americans overall say they would get a COVID-19 vaccine when it becomes available

If and when a coronavirus vaccine becomes available, will you get vaccinated? (% who say "yes")



A Third Of Americans Unwilling To Get Covid-19 Vaccine

Share of U.S. adults willing to get an FDA approved, no cost vaccine for Covid-19

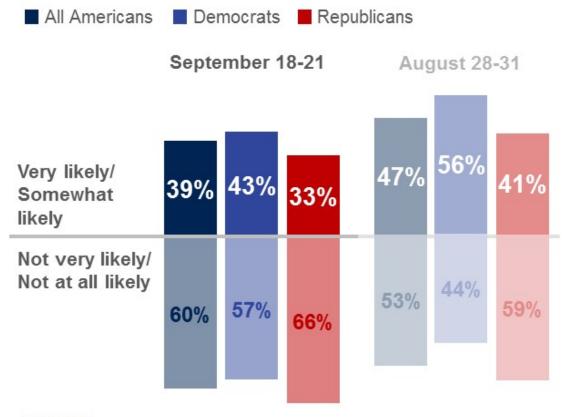




Majority unlikely to get vaccine as soon as one is available

Additionally, most Americans unwilling to spend much to get vaccinated against COVID-19

How likely are you to get the first generation COVID-19 vaccine, as soon as it's available?



How much would you be willing to pay out of pocket for the COVID-19 vaccine?



t for es

psos

© 2020 lpsos

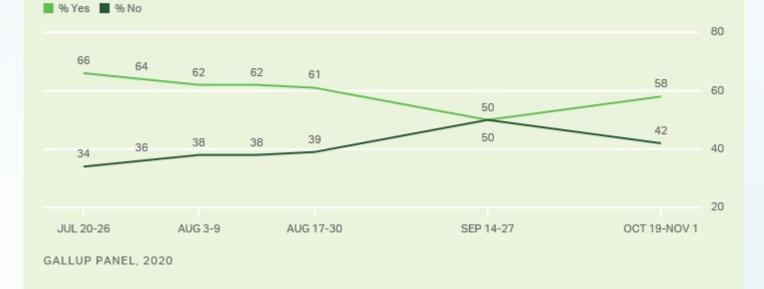
Newer USA Vaccine Surveys



Roughly Six in 10 Americans Would Agree to Be Vaccinated Against COVID-19

If an FDA-approved vaccine to prevent coronavirus/COVID-19 was available right now at no cost, would you agree to be vaccinated?

Gallop poll in October





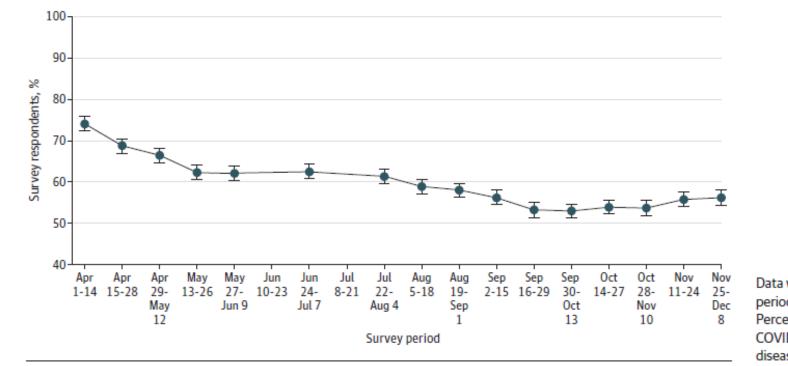


Figure. Percentage of US Adults Who Say They Are Likely to Get a COVID-19 Vaccine

Data were not collected for the periods of June 10-23 and July 8-21. Percentages and 95% CIs are plotted. COVID-19 indicates coronavirus disease 2019.



Willingness to Be Vaccinated Against COVID-19, by Party If an FDA-approved vaccine to prevent coronavirus/COVID-19 was available right now at no cost, would you agree to be vaccinated? % Yes Republicans Independents Democrats JUL 20-26 JUL 27-AUG 2 AUG 3-9 AUG 10-16 AUG 17-30 SEP 14-27 OCT 19-NOV 1 GALLUP PANEL, 2020



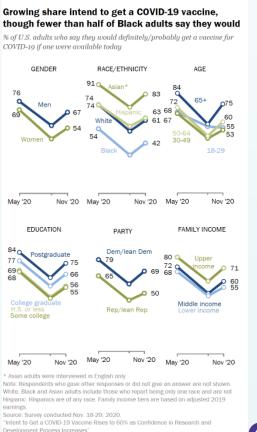
Gallop poll in October

Pew Poll Vaccine Acceptance: November 20, 2020

• As of November a Bor the coronavirus Pew Researchauff entervent COVID-19 were available reported that the majority of Americans say they would receive a COVID-19 vaccine, with acceptance of the vaccine having increased among thể mộs t population start getting a coronavirus vaccine and there groups. is more information ... Pretty certain Possible 46% would not get would get vaccine vaccine No answer <1%

> Note: Respondents who did not give an answer are not shown. Source: Survey conducted Nov. 18-29, 2020. "Intent to Get a COVID-19 Vaccine Rises to 60% as Confidence in Research and Development Process Increases"

PEW RESEARCH CENTER



PEW RESEARCH CENTER

Carles P

CW HOSTED

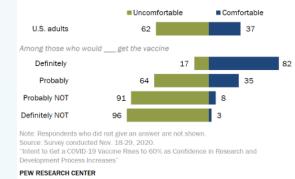
Coordinating Community Support for Healthcare Workers and Families

Pew Poll Vaccine Acceptance: November 20, 2020

• However the about getting serious case of the disease Americans Would Still De Definitely uncomfortable to be and require hospitalization 74 among the first to 30 52 receive the vaccine, a sign that there is still some hesitancy 19 towards receiving to this year 78 46 Have NO Among those who typically get a flu shot . Every year 22 77 Every few years 33 Rarely/Never 61 Note: Respondents who did not give an answer are not shown. Source: Survey conducted Nov. 18-29, 2020. "Intent to Get a COVID-19 Vaccine Rises to 60% as Confidence in Research and PEW RESEARCH CENTER

Majority of Americans say they would be uncomfortable being among the first to get vaccine

% of U.S. adults who say they would be ____ being one of the first groups of people to get a coronavirus vaccine





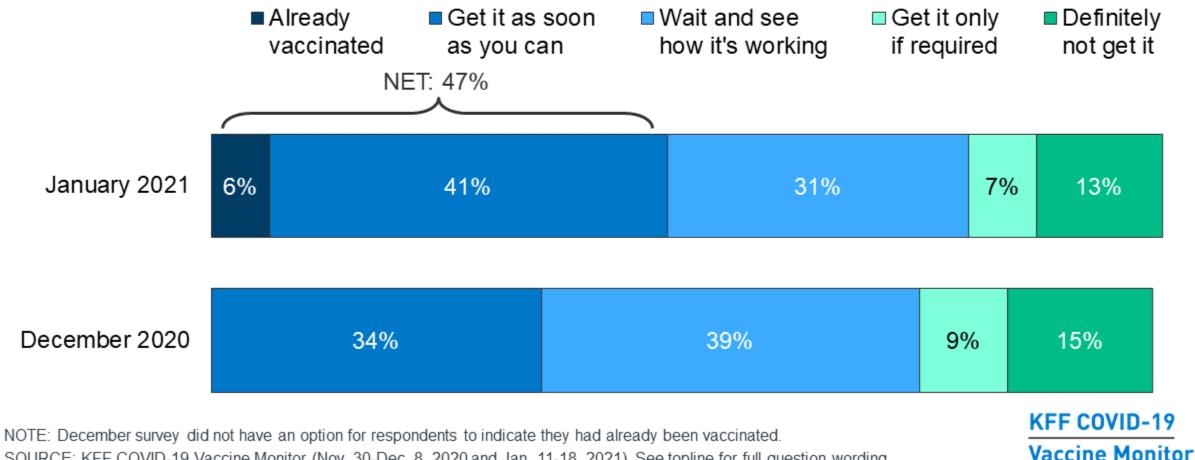


Kaiser Family Foundation Surveys



Compared To December, Larger Share Now Want COVID-19 Vaccine "As Soon As Possible," Fewer Want To "Wait And See"

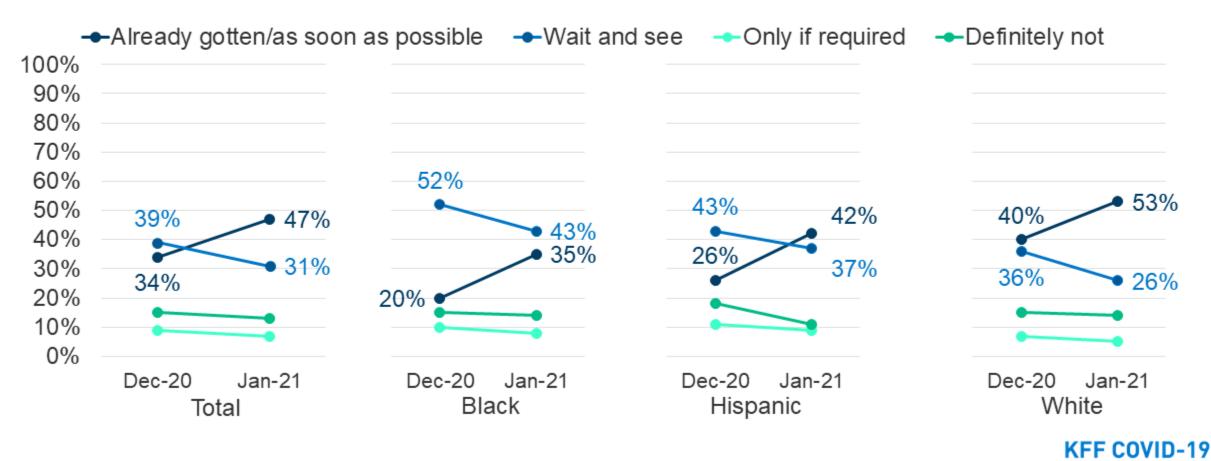
Have you personally received at least one dose of the COVID-19 vaccine, or not? When an FDA approved vaccine for COVID-19 is available to you for free, do you think you will...?



SOURCE: KFF COVID-19 Vaccine Monitor (Nov. 30-Dec. 8, 2020 and Jan. 11-18, 2021). See topline for full guestion wording.

Vaccine Enthusiasm Increased Across Racial/Ethnic Groups, But Black And Hispanic Adults Remain More Wary Than White Adults

Percent who say they will get a COVID-19 vaccine:

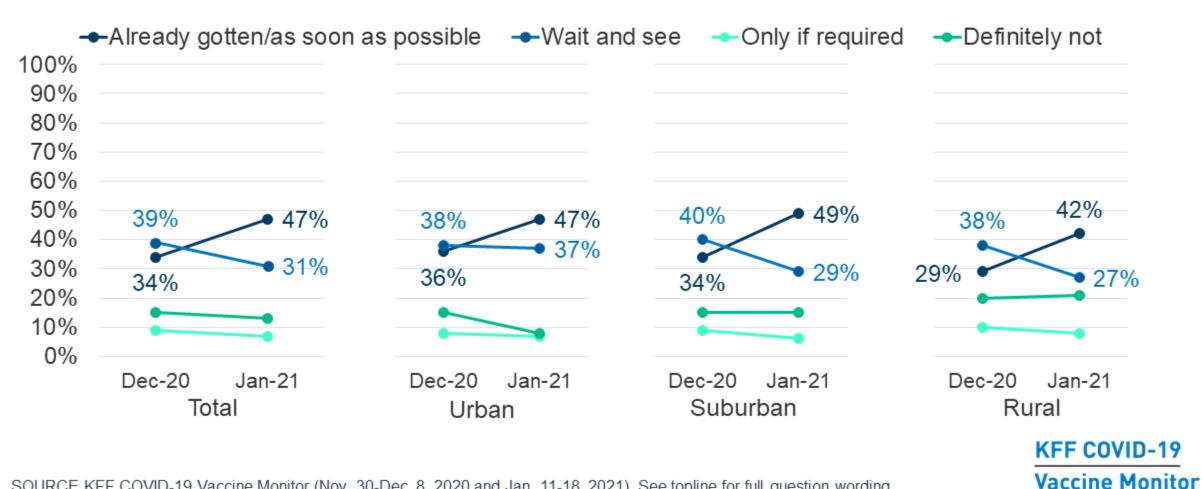


Vaccine Monitor

SOURCE KFF COVID-19 Vaccine Monitor (Nov. 30-Dec. 8, 2020 and Jan. 11-18, 2021). See topline for full question wording.

COVID-19 Vaccine Enthusiasm Has Shifted Across Community Types, But Rural Residents Remain More Resistant

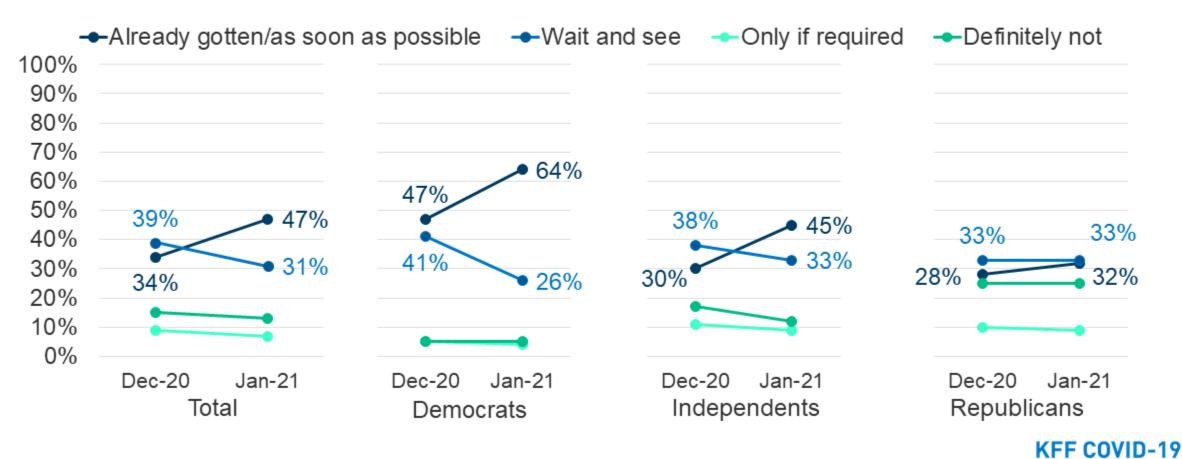
Percent who say they will get a COVID-19 vaccine:



SOURCE KFF COVID-19 Vaccine Monitor (Nov. 30-Dec. 8, 2020 and Jan. 11-18, 2021). See topline for full guestion wording.

Increase In Vaccine Enthusiasm Driven Entirely By Democrats And Independents; Republicans Remain Reluctant

Percent who say they will get a COVID-19 vaccine:



Vaccine Monitor

SOURCE KFF COVID-19 Vaccine Monitor (Nov. 30-Dec. 8, 2020 and Jan. 11-18, 2021). See topline for full question wording.

Older Adults, Democrats Most Enthusiastic To Get Vaccinated

Percent within each group who say they have already been vaccinated or when an FDA approved vaccine for COVID-19 is available to them for free, they would get the vaccine as soon as they can:

Ages 65 and older	70/		59%	66%
Democrats	7%		58%	64%
Health care workers		32%	26%	58%
White adults	7%	46%	53%	, 0
HH with a serious health condition	7%	45%	51%	
Suburban residents	7%	41%	49%	
Urban residents	5%	42%	47%	
Total	6%	41%	47%	
Independents	7%	38%	45%	
HH without a serious health condition	6%	37%	43%	
Hispanic adults	5%	37%	42%	
Rural residents	7%	35%	42%	
Essential workers (non-health)	5%	36%	41%	
Ages 18-29	3%	35%	38%	
Black adults	3%	32%	35%	
Republicans	4%	28%	32%	KFF COVID-19

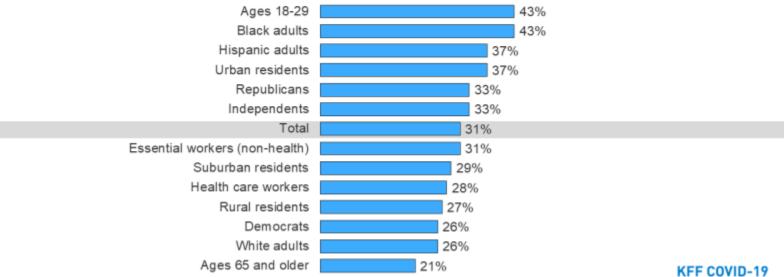
SOURCE: KFF COVID-19 Vaccine Monitor (conducted Jan. 11-18, 2021). See topline for full question wording.

Vaccine Monitor



Young Adults, Black Adults Most Likely To Want To "Wait And See"

Percent within each group who say, when an FDA approved vaccine for COVID-19 is available to them for free, they would wait and see how it is working for other people:



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

KFF COVID-19 Vaccine Monitor



Republicans And Rural Residents Most Reluctant To Get Vaccine

Percent within each group who say, when an FDA approved vaccine for COVID-19 is available to them for free, they would **only get it if required** or they would **definitely not get it**:

or

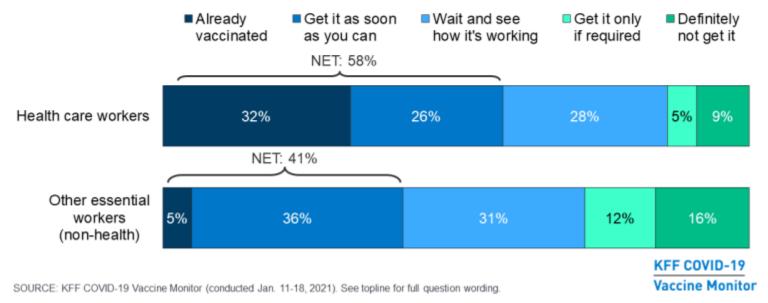
SOURCE: KFF COVID-19 Vaccine Monitor (conducted Jan. 11-18, 2021). See topline for full question wording.



Figure 8

Many Essential Workers, Including Some Health Care Workers, Remain Hesitant Or Reluctant To Get COVID-19 Vaccine

Have you personally received at least one dose of the COVID-19 vaccine, or not? When an FDA approved vaccine for COVID-19 is available to you for free, do you think you will...?



HCW HOSTED Coordinating Community Support for Healthcare Workers and Families

Compared with doctors and nurses, other health professionals— E.M.T.s, home health aides, therapists—are generally less likely to say that they'll get immunized

- A recent survey of C.N.A.s found that nearly <u>three-quarters</u> were hesitant to get the vaccine.
- At Yale-New Haven hospital, <u>ninety per cent</u> of medical residents chose to get the vaccine immediately, but only forty-two per cent of workers in environmental services and thirty-three per cent of food-service workers did.
- The problem may be most pressing in nursing homes. In December, the governor of Ohio, Mike DeWine, <u>said</u> that sixty per cent of the state's nursing-home staff had declined the vaccine; in North Carolina, the number is <u>estimated</u> to be more than fifty per cent.
- According to the C.E.O. of Pruitt Health—an organization that runs about a hundred longterm-care facilities across the South—<u>seventy per cent</u> of employees in those facilities declined the first dose.
- Hesitancy is less outright rejection than cautious skepticism



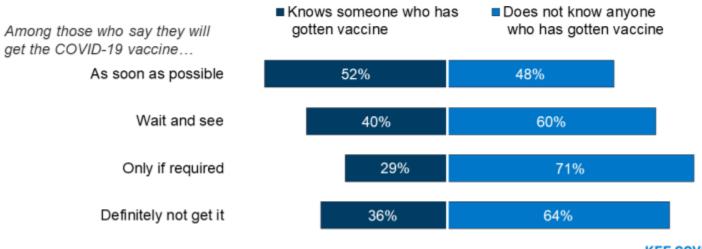
Military service members are not mandated* to get the vaccine and many are hesitant

- About 33 percent of service members have declined voluntary <u>coronavirus</u> vaccinations -- defense dept
 - Blue star survey: About 40 percent of U.S. troops surveyed are planning to receive the vaccine, 49 percent are not and 11 percent are undecided,
 - About 32 percent of military spouses said they were planning to receive it, while 54 percent were against doing so and 14 percent were undecided.
 - 71 percent of survey respondents who are not planning to seek vaccination distrust the vaccine's development process or timeline. About 70 percent have concerns about vaccine safety.
 - About 58 percent of respondents said they prefer to wait to see if additional side effects arise in other people who take the vaccine before taking it themselves.



Knowing Someone Who Has Been Vaccinated For COVID-19 Is Correlated With Vaccine Enthusiasm

Do you personally know anyone who has been vaccinated for COVID-19, or not?

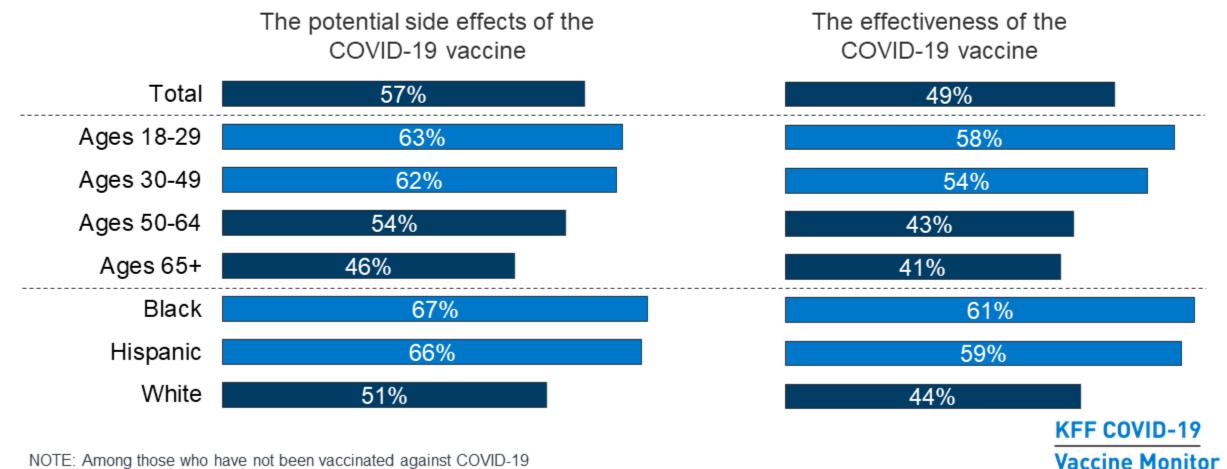


NOTE: Among those who have not been vaccinated against COVID-19 SOURCE: KFF COVID-19 Vaccine Monitor (conducted Jan. 11-18, 2021). See topline for full question wording. KFF COVID-19 Vaccine Monitor



Majorities Of Younger, Black, Hispanic Adults Say They Don't Have Enough Information About Vaccine Side Effects Or Effectiveness

Percent who say they feel they **do not have enough information** about each of the following:

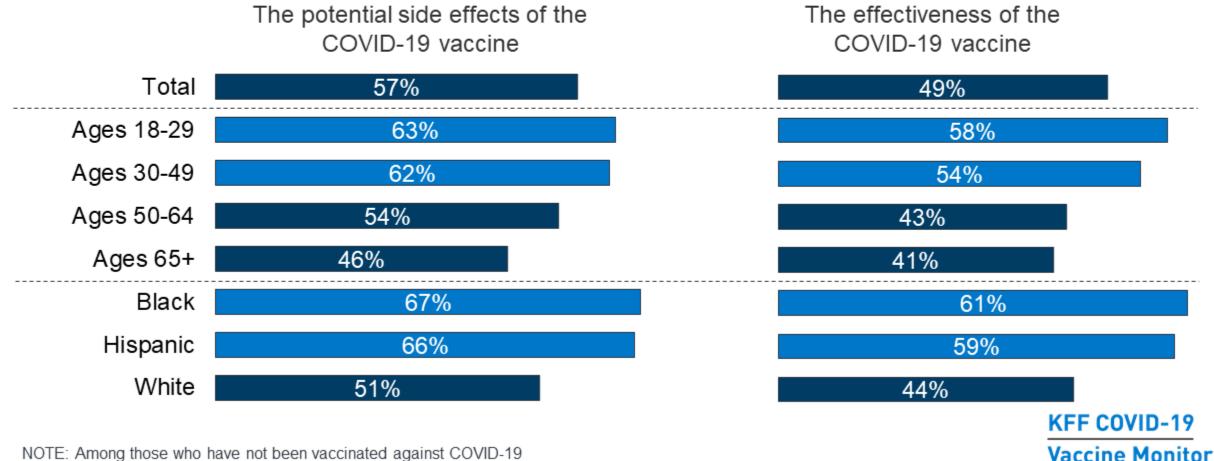


NOTE: Among those who have not been vaccinated against COVID-19

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

Majorities Of Younger, Black, Hispanic Adults Say They Don't Have Enough Information About Vaccine Side Effects Or Effectiveness

Percent who say they feel they **do not have enough information** about each of the following:

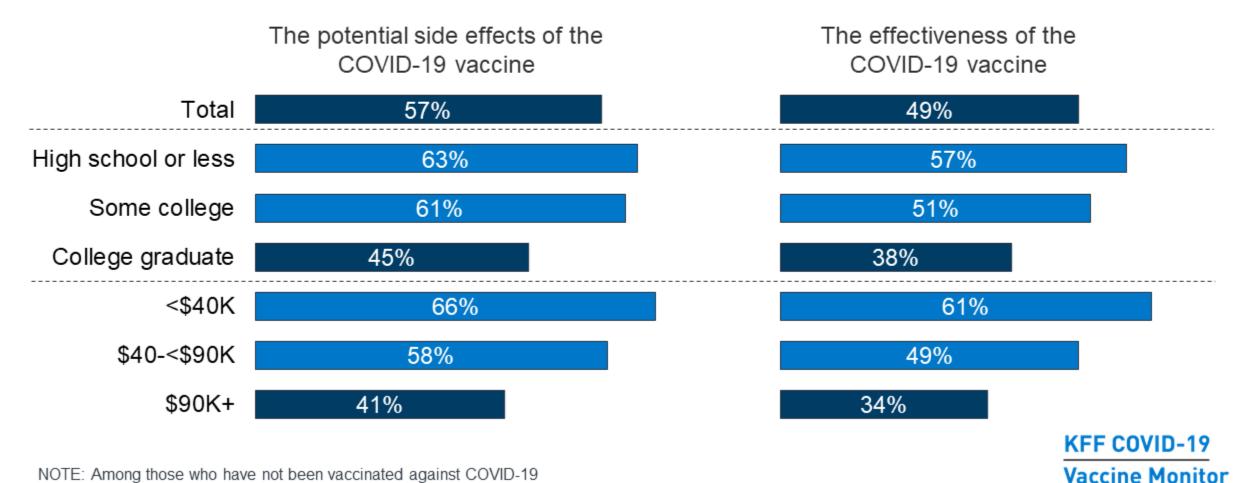


NOTE: Among those who have not been vaccinated against COVID-19

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

Lower-Income Adults And Those Without College Degrees More Likely To Say They Don't Have Enough Information About Vaccine

Percent who say they feel they **do not have enough information** about each of the following:

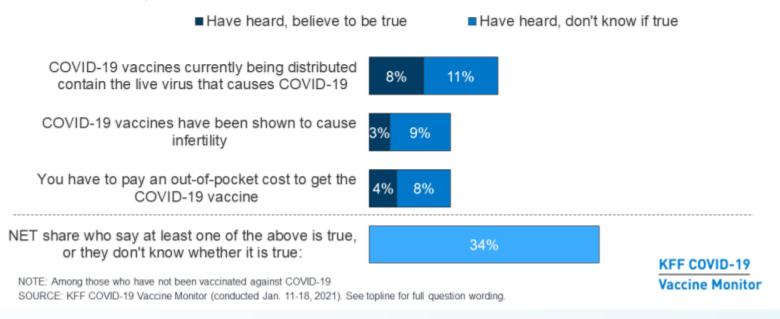


NOTE: Among those who have not been vaccinated against COVID-19

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

One-Third Of The Unvaccinated Believe Or Are Unsure About Some Common COVID-19 Vaccine Myths

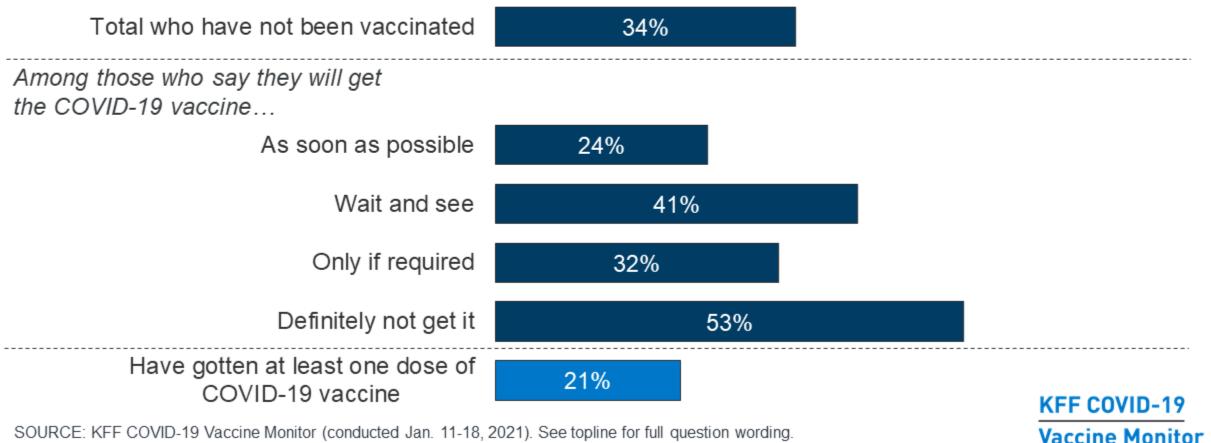
Have you heard anyone say or have you read anywhere that...? IF YES: To the best of your knowledge is that true or false, or do you not know whether it is true or false?





Those In "Wait And See" And "Definitely Not" Groups Are More Likely To Believe Or Be Unsure About COVID-19 Vaccine Myths

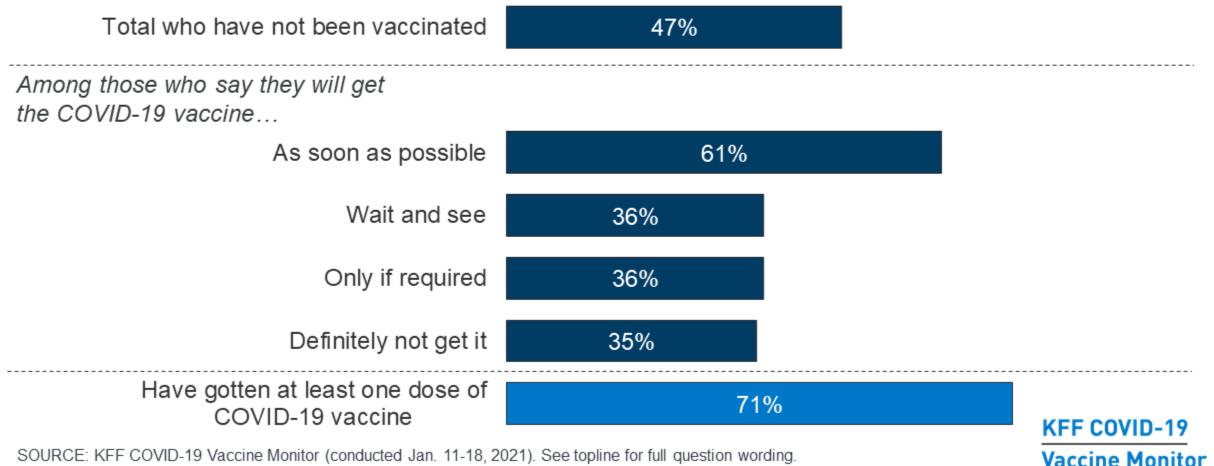
Percent who believe or are unsure about the truth of 3 COVID-19 vaccine myths (vaccines contain the live virus, vaccine cause infertility, and out-of-pocket cost is required to get vaccinated):



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

About Half Are Aware That Face Masks Are Still Required After Vaccination, Fewer Among More Vaccine-Hesitant Groups

Percent who are aware that once you get the COVID-19 vaccine, you still need to wear a face mask to help limit the spread of coronavirus:



Most Convincing Messages Emphasize Vaccine Effectiveness, Protection From Illness, And Return To Normal Life

Percent who say hearing each would make them **more likely** to get vaccinated for COVID-19:

The vaccines are highly effective in preventing illness

The vaccine will help protect you from getting sick

The quickest way for life to return to normal is for most people to get vaccinated

Millions of people have safely been vaccinated

We need people to get vaccinated to get the U.S. economy back on track

A doctor/health provider you trust got the vaccine

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

There is no cost to get the vaccine

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

A close friend/family member got vaccinated

56% 54% 46% 45% 38% 36% 32%

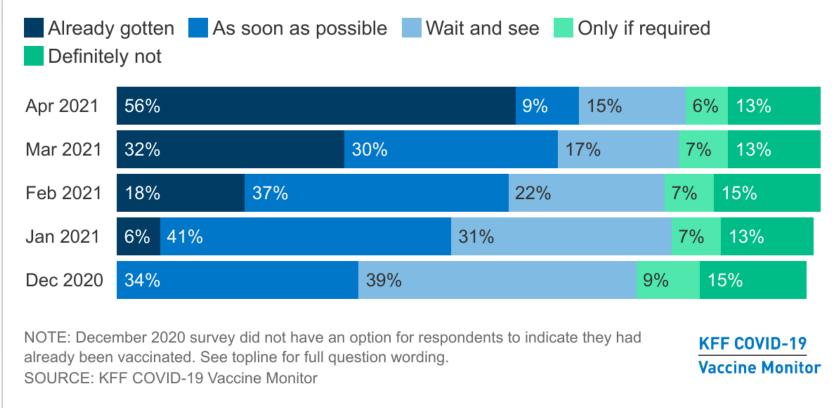
57%

KFF COVID-19 Vaccine Monitor

Figure 1

Over Half Of Adults Report Receiving A COVID-19 Vaccine, But Demand May Be Slowing As Eager Group Shrinks

Have you personally received at least one dose of the COVID-19 vaccine, or not? When an FDA authorized vaccine for COVID-19 is available to you for free, do you think you will...?



W HOSTED



Young People Of Color Less Likely Than Young White Adults To Report Having Received A COVID-19 Vaccine, More Likely To Want To "Wait And See"

Have you personally received at least one dose of the COVID-19 vaccine, or not? When an FDA authorized vaccine for COVID-19 is available to you for free, do you think you will...?

Already received at least one dose Get vaccinated ASAP Wait and see Only if required Definitely not

36% 24% 17% 9% 10% Black 36% 24% 9% 18% 11% Hispanic 50% 9% 16% 9% 15% White Ages 50-64 62% 17% 10% 7% Black 65% 20% 6% Hispanic 65% 11% 15% White Ages 65+ 83% Black 81% 7% 7% Hispanic 75% 9% 9% White **KFF COVID-19** NOTE: See topline for full question wording. SOURCE: KFF COVID-19 Vaccine Monitor (April 15-29, 2021) **Vaccine Monitor**

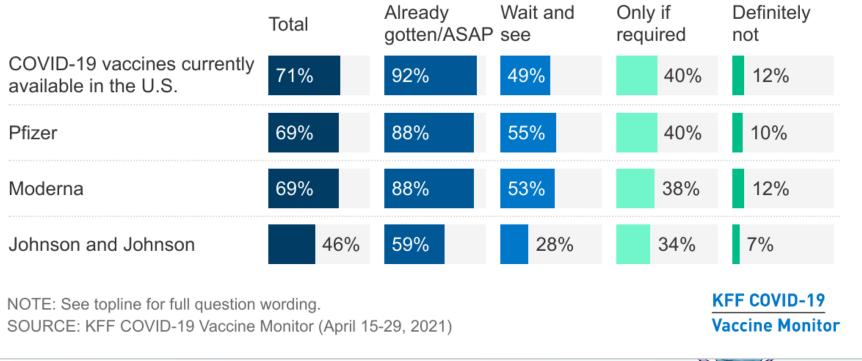
Ages 18-49





Confidence In Safety Of Johnson & Johnson COVID-19 Vaccine Is Low Among Key Unvaccinated Groups

Percent who say they are **very** or **somewhat** confident that each of the following COVID-19 vaccines are safe:



ing Community Support for Healthcare Workers and Families

N HOS



One In Five Unvaccinated Adults Say News Of Blood Clots Linked To J&J Vaccine Changed Their Mind About Getting Vaccinated, Highest Among Hispanic Women

How much have you heard or read about some rare cases in which a small number of individuals developed blood clots within two weeks of getting the Johnson and Johnson COVID-19 vaccine? Has this news caused you to change your mind about getting a COVID-19 vaccine, or not? Has this news...

Made you less likely to want any COVID-19 vaccine Made you less likely to want the J&J vaccine, but not changed your thinking about other vaccines Changed your thoughts about the vaccines in some other way Has not had impact Have not heard or read about blood clots



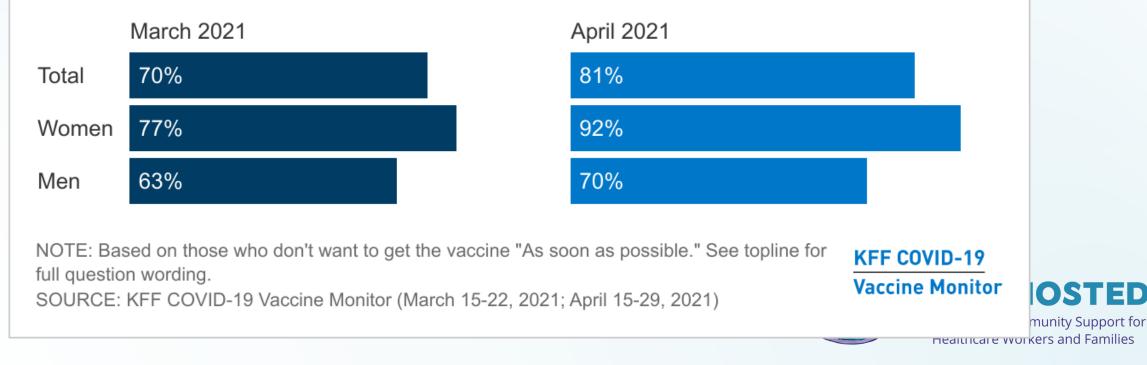
Black women	10% 56%	27%
Black men	11% 39%	31%
Hispanic women	18% 15% 40%	20%
Hispanic men	11% 42%	36%
White women	8% 60%	13%
White men	65%	19%

NOTE: Based on those who have not gotten the COVID-19 vaccine. See topline for full question wording. SOURCE: KFF COVID-19 Vaccine Monitor (April 15-29, 2021)



Concern About COVID-19 Vaccine Side Effects Increased From March To April, Particularly Among Women

Among those who are not yet convinced to get the vaccine right away, percent who are concerned they might experience serious side effects from the vaccine:



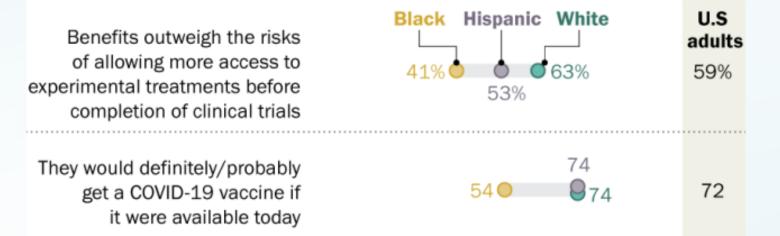
Minority Populations: distrust of medical interventions may affect vaccine acceptance

- Minority populations, especially Black and African Americans, are largely underrepresented in several vaccine studies.
- Historically and presently, patterns of blatant and systemic racism have sowed discord and mistrust between minority populations and medical research communities:
 - Tuskegee Study: In 1932, federal organizations (including the Public Health Service) began working with a population of black men to see the long-term effects and outcomes from syphilis
 - Participants were not consented; instead, being told they were being treated for "bad blood"
 - Treatment was withheld; doctors were told not to treat men in the study for syphilis
 - Even in 1947, when penicillin was shown to be an effective treatment, men in the study were not offered any treatment
 - False racial beliefs about biological differences have been shown to affect treatment outcomes
 → potentially propagating discriminatory/differential treatment



Black Americans are more skeptical of experimental treatments, potential COVID-19 vaccine than Hispanic and white adults

% of U.S. adults who say ...



Note: Whites and blacks include those who report being only one race and are non-Hispanic. Hispanics are of any race. Source: Survey conducted April 29-May 5, 2020.

PEW RESEARCH CENTER

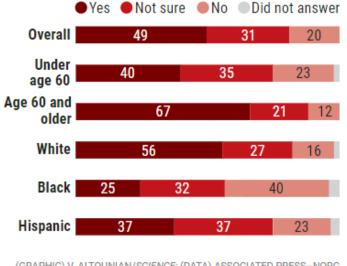


Vaccine intention

 A UC survey of 1,056 people in May found that only 25% of Blacks and 37% of Hispanics were willing to receive a COVID-19 vaccine, and 32% and 37% respectively were unsure

Do you plan to get a coronavirus vaccine when one is available?

For some in the United States, the answer is no, according to a survey of 1056 people in mid-May.



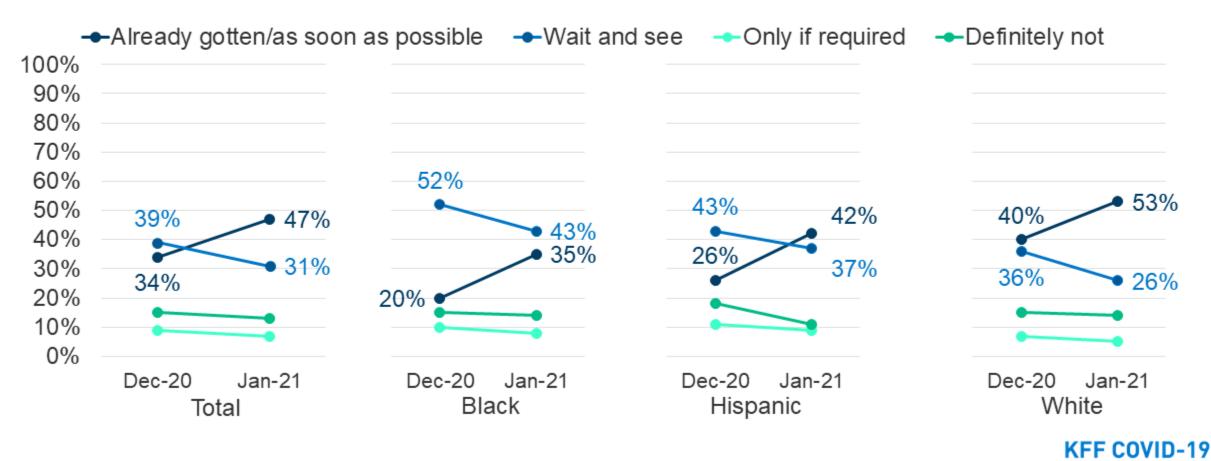
(GRAPHIC) V. ALTOUNIAN/SCIENCE; (DATA) ASSOCIATED PRESS-NORC CENTER FOR PUBLIC AFFAIRS RESEARCH AT THE UNIVERSITY OF CHICAGO





Vaccine Enthusiasm Increased Across Racial/Ethnic Groups, But Black And Hispanic Adults Remain More Wary Than White Adults

Percent who say they will get a COVID-19 vaccine:



Vaccine Monitor

SOURCE KFF COVID-19 Vaccine Monitor (Nov. 30-Dec. 8, 2020 and Jan. 11-18, 2021). See topline for full question wording.

When looking at vaccination rates by ethnic group several factors are in play

- Past history being used as guinea pigs; poor accesses to medical treatment
- Present: Structural vulnerability and health disparity –leading to more comorbidity and worse COVID outcomes (obesity, diabetes, hypertension, etc.)
- Present: Poor access to health services and lack of trust inequality of care offered
- Present: Poor access to vaccinations, difficulties in getting vaccinated
- Mis and disinformation circulating in social networks



Among the vaccine hesitant, concerns about safety are common

- Individuals who reported they wanted to wait and see before getting vaccinated, or that they would only get vaccinated if required, cited safety concerns as one of the primary reasons for not scheduling a vaccination appointment.
- Among those who are enthusiastic to get vaccinated, scheduling conflicts were by far the most limiting factor to scheduling their vaccination appointment.

Table 1: Top reasons why individuals have not tried to get a COVID-19 Vaccine appointment by vaccination intention (Open-end)

As soon as possible		Wait and see		Only if required		
Busy/didn't have time/schedule conflict	14%	Want to wait until more people have gotten it	23%	Don't want it/need it (general)	26%	
Can't take time off work/conflicts with work hours	12%	Concerned about safety and/or side effects	14%	Concerned about safety and/or side effects	10%	
Just haven't gotten around to it	9%	Vaccine is too new/not enough research	9%	Vaccine is too new/not enough research	6%	
Don't have proper documentation/not sure if eligible	8%	Don't want it/need it (general)	8%	Already had COVID	5%	
Lack of information about how to get the vaccine	7%	Waiting for medical reason	6%	Don't have proper documentation/not sure if eligible	4%	





Concerns About COVID-19 Vaccines Vary By Vaccination Intention

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

	Total	As soon as possible	Wait and see	Only if required	Definitely not
Might experience serious side effects	76%	56%	84%	75%	80%
The COVID-19 vaccines are not as safe as they are said to be	70%	39%	78%	65%	84%
Might be required to get vaccine even if they don't want to	59%	25%	61%	76%	72%
Might need to miss work if the side effects of the vaccine make them feel sick for a day or more	48%	42%	54%	48%	46%
The COVID-19 vaccine may negatively impact their fertility in the future*	48%	28%	44%		66%
May be required to provide a social security number or government issued ID in order to get the COVID-19 vaccine	34%	25%	33%	35%	41%
Won't be able to get the vaccine from a place they trust	32%	37%	37%	33%	21%
Might have to pay an out-of-pocket cost to get the COVID-19 vaccine	32%	45%	33%	36%	19%
Might need to take time off work to go and get the COVID vaccine	20%	21%	21%	20%	18%
It will be difficult to travel to a vaccination site	15%	24%	17%	13%	8%

Requirements, Incentives, And Conveniences May Increase Willingness To Get Vaccinated For Some

Percent who say they would be more likely to get the COVID-19 vaccine if:

	Total	Wait and see	Only if required	Definitely no
The COVID-19 vaccine was offered to them at a place they normally go for health care	30%	46%	31%	10%
Airlines required passengers to be vaccinated before they could fly	30%	41%	41%	11%
They only needed to get one dose of the COVID-19 vaccine	29%	45%	34%	8%
Being vaccinated was required to attend large gatherings such as sporting events and concerts	26%	40%	29%	8%
Getting vaccinated for COVID-19 was required for international travel	25%	33%	43%	7%
Their employer gave them paid time off to get vaccinated and recover from any side effects*		47%		
Their employer offered to pay them an extra \$200 to get vaccinated*	26%	39%		F
Their employer arranged for a medical provider to come to their work and administer the COVID-19 vaccine*	20%	32%		Cc

HCW HOSTED

Requiring COVID-19 Vaccine For Travel And Large Gatherings May Lead More Young Adults To Get Vaccinated

Percent who say they would be more likely to get the COVID-19 vaccine if:

	18-29 year-olds	30-49 year-olds	50-64 year-olds
The COVID-19 vaccine was offered to them at a place they normally go for health care	43%	26%	21%
Airlines required passengers to be vaccinated before they could fly	40%	27%	22%
Being vaccinated was required to attend large gatherings such as sporting events and concerts	39%	24%	15%
Getting vaccinated for COVID-19 was required for international travel	38%	21%	15%
They only needed to get one dose of the COVID-19 vaccine	37%	24%	32%

munity Support for kers and Families

Disinformation super spreaders: Just 12 People Are Behind Most Vaccine Hoaxes On Social Media, Research Shows

- Researchers have found just 12 people are responsible for the bulk of the misleading claims and outright lies about COVID-19 vaccines that proliferate on Facebook, Instagram and Twitter.
- "The 'Disinformation Dozen' produce 65% of the shares of anti-vaccine misinformation on social media platforms," said Imran Ahmed, chief executive officer of the Center for Countering Digital Hate, which identified the accounts.
- These figures are well-known to both researchers and the social networks. They include anti-vaccine activists, alternative health entrepreneurs



Many of those who experienced mild cases of COVID-19 are not worried about getting it again and are not getting vaccinated: this is a mistake

- While it is true that infection acquired immunity protects against reinfection with the virus, the CDC advises that you should be vaccinated even if you have already had COVID-19
- This is the case for four good reasons :

- Experts do not yet know how long you are protected from getting sick again after recovering from COVID-19
- You may get sick with a different variant of Covid-19 that will result in far more serious sickness
- Vaccinations reduce the transferability of virus more than infection related immunity
- Some of those who are long haulers for COVID-19 (symptoms lasting 30 days or longer) following infection have reported a reduction of such symptoms following vaccination



November poll finds majority of Canadians open to getting COVID vaccine, but many want to wait

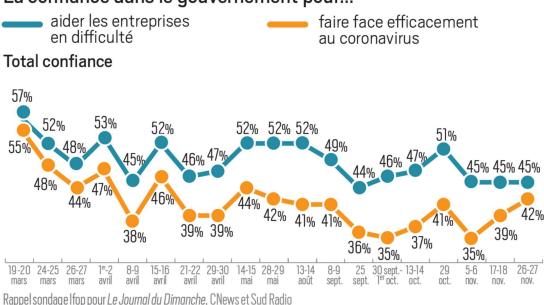
- A new Ipsos/Radio-Canada poll has found that most Canadians intend to get vaccinated against COVID-19, but that many would prefer to wait at least a month or two after a vaccine is approved
 - The internet poll surveyed 3001 people over the age of 18 across the country between November 20th and November 25th.
- Of those who responded, 64% said they would probably or certainly get vaccinated, while 16% said they would not.
 - 20% of these respondents said they were unsure as to whether they would get vaccinated.
- Of those who said they would get vaccinated, only 36% said they'd get vaccinated as soon as possible. Another 38% said they'd wait one or two months, and 11% were undecided as to when.



The USA is not the only country where vaccine hesitancy appears to be a problem at the moment

41% des Français ont **l'intention de se faire vacciner contre le Covid-19** lorsque cela deviendra possible

La confiance dans le gouvernement pour...



Sondage Ifop pour le JDD, réalisé les 26 et 27 novembre 2020 auprès d'un échantillon représentatif de 1013 personnes âgées de 18 ans et plus (méthode des quotas). Les interviews ont eu lieu par questionnaire autoadministré en ligne.

- French opposition to the COVID-19 vaccine grows as government unveils campaign
- A pool conducted by <u>the weekly Journal</u> <u>du Dimanche</u> on November 28th found that 59% of French people did not plan to get inoculated against the coronavirus.
- "Before we immunize ourselves against the virus, we need to immunize ourselves against fear," (health minister Olivier Véran referring to the rise in reticence of the French people)



Trust is essential for vaccine acceptance

Who the public trusts can influence vaccine uptake



Trust issues may affect lower tier health care workers willingness to accept vaccines

- 'If There's No Trust, There'll Be More Hesitancy': Nursing Homes Must Overcome Staff Skepticism of COVID Vaccine" (Skilled Nursing News 12/2/2020)
- This may especially be the case if the health care worker is from a minority group that may have suspicions that those who are first to receive vaccination are guinea pigs to test the vaccine's safety and efficacy.
- In order to get buy-in from this group that is at greatest risk to COVID-19, they must feel that they have a safety net in the event that they fall ill from taking the vaccine and are unable to come to work and/or get a paycheck.



What happens if not enough people nationally take the vaccine?

What happens if many people in some regions take it but in other regions a smaller percentage agree to do so?



Vaccine hesitancy is a global public health problem that must be addressed

- In 2019, before the pandemic hit, the World Health Organization (WHO) listed vaccine hesitancy as one of the top 10 global health threats.
- Those who hold off on getting the eventual COVID-19 vaccine pose a threat to developing herd immunity to the virus.
- Vaccine hesitancy is a persistent problem fostered by both mistrust in one's government and misinformation propagated by stakeholders with a variety of self serving agendas.
 - Some of these same stakeholders have challenged COVID-19 policies linked to mask wearing and shutdowns as ways of mitigating the virus.
- Mis/disinformation does not only reinforce the views of anti-vaxxers but leads many others to also become vaccine hesitant which will ultimately delay herd immunity.

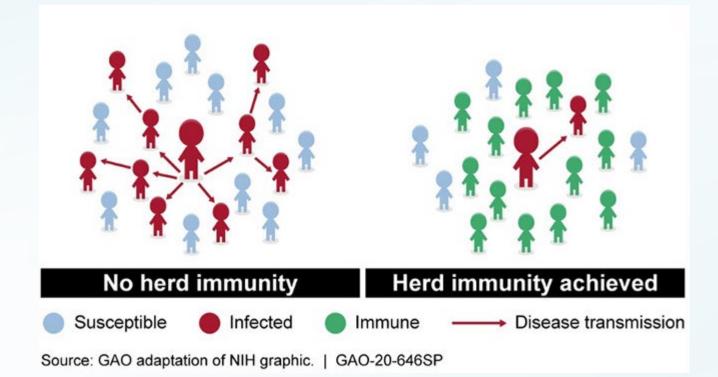


Community variation in rates of vaccination

- If the members of a particular community chose not to vaccinate, then the entire community is vulnerable to an epidemic (think of a pandemic, but only contained to that specific community/neighboring communities).
- Once a critical mass of infected individuals is reached in one locale, it enables a contagion to spread throughout the rest of the population
 - This is true even if a significant fraction of the overall population is vaccinated.
- Remember, if and when a community has reached herd immunity, there will still be a proportion of people in that community that will be susceptible to infection.
 - We need to think of communities as fluid. As isolated as a community may be, there will still always be some level of travel in and out of that community which would allow for transmission of the virus from a locale that chooses not to vaccinate to locales that do receive vaccinations.



When enough people become vaccinated, the number of people the disease can spread to is limited





Vaccine delivery to reach herd immunity

- Dr. Fauci, estimates that <u>80 to 85 percent</u> of Americans need to be vaccinated to reach herd immunity.
- Both the Pfizer and Moderna vaccines require two doses. Eighty percent of the American population is around 264 million people, so we need to administer 528 million doses to achieve herd immunity.
- The Centers for Disease Control and Prevention reported on December 29, 2020 that <u>2.1 million</u> <u>doses</u> of coronavirus vaccines have been administered in the last two weeks.
 - At this rate, it would have taken, approximately 10 years to reach the level of inoculation needed for herd immunity
- In order for every American to be able to receive the vaccine by the end of June 2021, 3.5 million vaccinations will need to be administered per day.
 - The issue is not just supply (production is ramping up to meet the challenge), but distribution and administration.
 - Since February 2021 we are on track to providing vaccinations to all who want it by June 2021. Will this be enough to each herd immunity, and is herd immunity possible? We will have to wait and see . In any case, the more people who get vaccinated the less chance of transmission and slower the evolution of variants.



What is the governments role in insuring vaccination coverage? Anticipate some political controversy.

- In order to reach herd immunity, it is likely that vaccines will need to be mandated for workplaces and schools.
 - As is the case of measles, those who refuse to get their children vaccinated for religious reasons may find their children are barred from public schools, day care, other childcare facilities, etc.
- However, there is a difference between COVID-19 and measles.
 - Measles is highly infectious and results in serious disease for a significant percentage of children.
 - Although the likelihood will children experience a severe illness from COVID-19 is relatively lower than measles, they can still transmit the infection to other vulnerable populations (teachers/school faculty) who may experience severe disease.



Employer citizenship and civil liberties

- If the government does not mandate vaccination, it may be left up to employers to mandate vaccination (similar to how some employers have mandated mask wearing indoors and physical distancing).
- This will be a major headache for business owners and human relations departments who will be left with a decision as to whether to mandate or encourage vaccination for COVID-19 based on safety issues for fellow employees and customers etc.
 - If they require proof of vaccination to be hired for a job, then all employees presently hired must have the same requirement to remain on the job
 - If they mandate vaccinations, then by law they must allow for exemptions
 - However, those who chose not vaccinate due to some conviction will likely be required to protect other employees by alternative means like continued mask wearing and physical distancing for some time into the future until vaccination is no longer required to prevent transmission.



Vaccine mandates at workplaces

- The Equal Employment Opportunity Commission <u>issued guidance in December of</u> <u>2020</u> stating that employers were legally permitted to require employees to be vaccinated before they return to work.
- In polls, executives have shown a willingness to require vaccinations.
 - In a <u>survey</u> of 1,339 employers conducted by Arizona State University's College of Health Solutions and funded by the Rockefeller Foundation, 44 percent of U.S. respondents said they planned to mandate vaccinations for their companies.
 - In a separate poll of 446 employers <u>conducted by Willis Towers Watson</u>, a riskmanagement firm, 23 percent of respondents said they were "planning or considering requiring employees to get vaccinated for them to return to the worksite."



U.S. employers and COVID-19 vaccination policy : Willis Towers Watson survey

- A total of 446 employers participated in the 2021 Emerging Trends in Health Care Survey conducted between February 23 and March 12, 2021. Respondents employ 6.3 million workers
- The Survey found more than eight in 10 employers (84%) agree immunization of the population will allow the country to reactivate the economy, and 80% of employers say it will allow them to move to a new normal in terms of returning to the workplace.
- Yet, relatively few employers (10%) believe vaccines should be mandatory.
- Policies being put in place:
 - More than a third of employers (35%) have developed policies and procedures to make it easy for workers to get the vaccine; another 50% are considering doing so.
 - One in four employers (23%) are helping employees get vaccinated by obtaining vaccines to administer to their employees or facilitating access to vaccines through a third party. Another 55% are planning or considering doing so.
 - Among employers that have taken action, or are planning or considering doing so, more than half (55%) are arranging for vaccines to be administered at retail pharmacies, while 45% plan to create a center or onsite/near-site facility to deliver vaccines.



Willis Towers Watson survey

- Two in 10 respondents are offering incentives to get vaccinated, while nearly three in 10 (29%) are planning or considering doing so.
 - Among those, 39% are providing extra leave or vacation time to get vaccinated, while a quarter (27%) are providing additional leave to employees who have negative reactions or get sick from the vaccine.
 - One in 10 are offering cash or other financial incentives.
- The survey also found
 - Just one in 10 employers (10%) are planning or considering requiring proof of vaccination as a condition of employment;
 - Nearly one in four (23%) are planning or considering requiring employees to get vaccinated for them to return to the worksite.
 - Over half of respondents (55%) expect their workforces to be vaccinated by the end of 2021

Coo H

Where does the supreme court stand on Vaccine mandates

- Requiring vaccines for access to public life is not new. The Supreme Court ruled about a century ago that states could require vaccinations for children attending public school.
- In December, the Equal Employment Opportunity Commission issued guidance stating that employers are legally allowed to require employees to be vaccinated before they return to offices.
- However, 25 states are considering legislation that could limit a company's ability to require vaccines for students, employees or the public



How Americans Feel About Proof Of Vaccination

% favoring/opposing businesses requiring proof of Covid-19 vaccination to do the following



