

COVID-19 — Vaccine Hesitancy

Fielded April 2021

Every month, IBM Watson Health® conducts a health poll that surveys approximately 3,000 Americans to gauge attitudes and opinions on a wide range of healthcare issues.

This health poll is powered by the IBM Watson Health PULSE® Healthcare Survey, an independently funded, multi-modal (land line, cell phone, internet) survey that collects information from approximately 60,000 U.S. households annually.

The results depicted in this report represent responses from 3,002 survey participants interviewed from April 1–15, 2021, with a margin of error of +/- 1.8%.

Executive summary

This health poll asked Americans about coronavirus disease 2019 (COVID-19) and their opinions about receiving a COVID-19 vaccination.

Of all respondents:

49%

said they had received a COVID-19 vaccination, compared with 32% who said the same in March 2021.¹ These rates tend to increase with age, education and income.

23%

said they are Very Concerned about catching COVID-19 in 2021, while 26% said they are Not at all Concerned.

43%

of those who had not taken the COVID-19 vaccine said they plan to receive one, 40% said they would not and 17% said they did not know if they would receive one.

90%

said they are practicing social distancing and 94% said they are wearing masks in public.

22%

of those who had not taken the COVID-19 vaccine said the main reason is because it is Not Available or Offered. Other reasons given included Concern Over Safety (19%) and Concern Over Side-Effects (17%).

16%

said they never feel depressed, while 7% said they feel depressed all of the time. When asked to rate their overall mental well-being, 29% said Good, which was the most frequently given response.

Source:

54%

said they feel comfortable joining a vaccine credentialing system. This rate tends to increase with education and income.

1. Results from PULSE Health Poll conducted in March 2021: <https://www.ibm.com/downloads/cas/8JK9WEYK>

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Note: Bolded figures are statistically significant.

Note: Care should be taken when interpreting Q6 and Q8 due to small sample sizes.

Question 1: Have you received the COVID-19 vaccination?

Question 2: (For those who have received the COVID-19 vaccination) Are you a Medical worker?

Age group (in years)	Yes	No
<35	31.4%	66.3%
35 - 64	46.2%	52.7%
65+	77.1%	22.8%
Total	49.0%	49.7%

Age group (in years)	Yes	No
<35	19.1%	80.9%
35 - 64	9.1%	90.9%
65+	1.2%	98.8%
Total	8.1%	91.9%

Education level	Yes	No
HS or Less	31.1%	68.3%
Some College/Associate	41.8%	56.9%
College+	62.7%	35.8%
Total	49.0%	49.7%

Education level	Yes	No
HS or Less	3.4%	96.6%
Some College/Associate	6.5%	93.5%
College+	9.9%	90.1%
Total	8.1%	91.9%

Generation	Yes	No
Silent Generation	84.5%	15.5%
Baby Boomers	70.2%	29.4%
Generation X	46.8%	51.9%
Millennials	32.6%	65.5%
Total	49.0%	49.7%

Generation	Yes	No
Silent Generation	2.4%	97.6%
Baby Boomers	1.7%	98.3%
Generation X	9.1%	90.9%
Millennials	18.1%	81.9%
Total	8.1%	91.9%

Annual income	Yes	No
<\$25k	31.5%	66.4%
\$25k - \$49.9k	43.6%	55.9%
\$50k - \$99.9k	51.6%	47.4%
\$100k+	68.8%	30.3%
Total	49.0%	49.7%

Annual income	Yes	No
<\$25k	3.0%	97.0%
\$25k - \$49.9k	7.0%	93.0%
\$50k - \$99.9k	9.4%	90.6%
\$100k+	10.1%	89.9%
Total	8.1%	91.9%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Question 3: (For those who have received the COVID-19 vaccination) Are you a Front line worker?

Age group (in years)	Yes	No
<35	21.0%	79.0%
35 - 64	13.7%	86.3%
65+	1.4%	98.6%
Total	10.7%	89.3%

Education level

HS or Less	9.1%	90.9%
Some College/Associate	10.8%	89.2%
College+	11.1%	88.9%
Total	10.7%	89.3%

Generation

Silent Generation	0.0%	100.0%
Baby Boomers	3.2%	96.8%
Generation X	14.2%	85.8%
Millennials	19.7%	80.3%
Total	10.7%	89.3%

Annual income

<\$25k	5.8%	94.2%
\$25k - \$49.9k	9.3%	90.7%
\$50k - \$99.9k	12.6%	87.4%
\$100k+	12.6%	87.4%
Total	10.7%	89.3%

Question 4: (For those who have received the COVID-19 vaccination) Are you a Senior citizen?

Age group (in years)	Yes	No
<35	1.0%	99.0%
35 - 64	1.0%	99.0%
65+	86.1%	13.9%
Total	30.8%	69.2%

Education level

HS or Less	33.8%	66.2%
Some College/Associate	38.7%	61.3%
College+	26.9%	73.1%
Total	30.8%	69.2%

Generation

Silent Generation	97.6%	2.4%
Baby Boomers	68.9%	31.1%
Generation X	1.1%	98.9%
Millennials	0.8%	99.2%
Total	30.8%	69.2%

Annual income

<\$25k	31.9%	68.1%
\$25k - \$49.9k	40.8%	59.2%
\$50k - \$99.9k	34.1%	65.9%
\$100k+	18.2%	81.8%
Total	30.8%	69.2%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Question 5: (For those who have not received the COVID-19 vaccination) are you more likely to get a vaccine now that over 90 million Americans have received one?

Age group (in years)	Yes	No	Don't Know
<35	40.9%	49.2%	9.7%
35 - 64	40.7%	40.9%	17.4%
65+	31.6%	43.3%	24.6%
Total	39.9%	44.2%	15.3%

Education level

HS or Less	31.1%	49.6%	18.1%
Some College/Associate	38.5%	46.1%	15.5%
College+	49.9%	37.0%	12.5%
Total	39.9%	44.2%	15.3%

Generation

Silent Generation	12.9%	49.2%	37.9%
Baby Boomers	35.7%	38.0%	26.0%
Generation X	42.0%	39.9%	16.8%
Millennials	40.0%	49.7%	10.1%
Total	39.9%	44.2%	15.3%

Annual income

<\$25k	30.2%	48.9%	21.0%
\$25k - \$49.9k	42.3%	43.8%	13.6%
\$50k - \$99.9k	41.6%	45.7%	12.0%
\$100k+	52.4%	34.9%	12.7%
Total	39.9%	44.2%	15.3%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Question 5: (For those who have not received the COVID-19 vaccination)
Do you plan to get the COVID-19 vaccination?

Age group (in years)	Yes	No	Don't Know
<35	44.7%	43.5%	11.5%
35 - 64	42.7%	37.8%	19.5%
65+	35.1%	39.8%	25.1%
Total	42.6%	40.1%	17.1%

Education level

HS or Less	33.2%	46.0%	20.8%
Some College/Associate	40.9%	42.7%	16.3%
College+	53.6%	31.7%	14.3%
Total	42.6%	40.1%	17.1%

Generation

Silent Generation	17.2%	49.2%	33.6%
Baby Boomers	38.3%	35.7%	26.1%
Generation X	43.5%	36.7%	19.7%
Millennials	43.9%	44.2%	11.6%
Total	42.6%	40.1%	17.1%

Annual income

<\$25k	32.3%	45.7%	21.9%
\$25k - \$49.9k	42.2%	37.9%	19.7%
\$50k - \$99.9k	48.4%	41.6%	9.8%
\$100k+	54.7%	29.7%	15.2%
Total	42.6%	40.1%	17.1%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Note: Care should be taken when interpreting Q6 and Q8 due to small sample sizes.

Question 6: (For those who have not received the COVID-19 vaccination)
What is the main reason you have not received the COVID-19 vaccination?
(Note: Details excluded for categories with less than 5% response rate)

Age group (in years)	Not available/ offered	Safety Concerns	Side Effects	I Don't Need In General	Questions/ Concerns About Vaccine
<35	21.3%	18.3%	12.2%	9.6%	8.6%
35 - 64	23.5%	19.4%	17.6%	7.5%	8.1%
65+	12.5%	19.2%	26.0%	6.7%	8.9%
Total	21.5%	19.0%	16.5%	8.2%	8.4%
Education level					
HS or Less	20.7%	19.9%	17.0%	6.5%	9.8%
Some College/Associate	19.1%	21.6%	17.6%	9.7%	6.7%
College+	24.8%	15.6%	14.8%	8.5%	8.7%
Total	21.5%	19.0%	16.5%	8.2%	8.4%
Generation					
Silent Generation	12.9%	0.0%	27.4%	5.8%	28.7%
Baby Boomers	14.1%	19.4%	25.4%	7.5%	9.4%
Generation X	24.4%	20.2%	17.0%	6.4%	8.6%
Millennials	21.9%	18.2%	12.8%	10.0%	7.5%
Total	21.5%	19.0%	16.5%	8.2%	8.4%
Annual income					
<\$25k	17.2%	21.1%	19.5%	9.2%	6.2%
\$25k - \$49.9k	22.9%	16.9%	15.5%	6.9%	9.9%
\$50k - \$99.9k	22.3%	19.2%	15.6%	7.0%	10.4%
\$100k+	26.9%	19.2%	14.8%	10.3%	5.3%
Total	21.5%	19.0%	16.5%	8.2%	8.4%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Note: Care should be taken when interpreting Q6 and Q8 due to small sample sizes.

Question 6: (For those who have not received the COVID-19 vaccination)
What is the main reason you have not received the COVID-19 vaccination?
(Note: Details excluded for categories with less than 5% response rate)

	Other	Concern about vaccine giving COVID-19	Don't know	No Insurance (Cost)	Already had COVID-19	Refused	Insurance may not cover (Cost)
Total	4.8%	2.4%	2.4%	1.8%	2.8%	0.9%	0.7%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Question 7: How often do you feel depressed?

Age group (in years)	All of the time	Most of the time	Sometimes	Rarely	Never
<35	10.0%	17.5%	40.9%	22.5%	8.6%
35 - 64	7.7%	10.1%	36.2%	31.1%	14.2%
65+	1.2%	2.2%	26.7%	40.6%	28.9%
Total	6.9%	10.4%	35.4%	30.9%	15.9%

Education level

HS or Less	7.1%	12.8%	34.1%	26.6%	18.6%
Some College/Associate	4.8%	10.7%	37.4%	32.5%	14.0%
College+	8.1%	9.0%	34.7%	32.0%	15.7%
Total	6.9%	10.4%	35.4%	30.9%	15.9%

Generation

Silent Generation	0.0%	2.0%	22.7%	38.0%	34.8%
Baby Boomers	1.4%	3.6%	28.5%	39.5%	26.7%
Generation X	8.7%	9.8%	36.5%	31.2%	13.2%
Millennials	9.6%	16.9%	40.3%	23.4%	9.1%
Total	6.9%	10.4%	35.4%	30.9%	15.9%

Annual income

<\$25k	8.1%	14.9%	36.4%	24.8%	15.1%
\$25k - \$49.9k	5.2%	9.5%	40.2%	29.3%	15.5%
\$50k - \$99.9k	5.7%	9.2%	34.6%	33.2%	16.9%
\$100k+	10.6%	9.6%	28.1%	35.9%	15.3%
Total	6.9%	10.4%	35.4%	30.9%	15.9%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Note: Care should be taken when interpreting Q6 and Q8 due to small sample sizes.

Question 8: (For those who have not received the COVID-19 vaccination)
What would it take for you to get the COVID-19 vaccination? (Note: Details excluded for categories with less than 5% response rate)

Age group (in years)	Availability	Will not take vaccine	Additional safety information	Additional side effect information
<35	20.7%	30.4%	8.0%	6.8%
35 - 64	23.2%	28.2%	7.8%	6.4%
65+	13.8%	31.7%	4.8%	13.0%
Total	21.4%	29.4%	7.6%	7.2%

Education level

HS or Less	13.5%	35.8%	7.5%	4.4%
Some College/Associate	22.9%	29.5%	5.4%	9.3%
College+	28.1%	22.6%	9.9%	8.2%
Total	21.4%	29.4%	7.6%	7.2%

Generation

Silent Generation	12.9%	49.2%	0.0%	6.4%
Baby Boomers	16.4%	30.1%	6.9%	13.0%
Generation X	22.8%	27.7%	7.7%	6.4%
Millennials	22.0%	30.2%	7.9%	6.0%
Total	21.4%	29.4%	7.6%	7.2%

Annual income

<\$25k	15.9%	35.7%	8.2%	4.9%
\$25k - \$49.9k	21.9%	27.0%	9.1%	9.4%
\$50k - \$99.9k	25.1%	29.8%	5.4%	5.9%
\$100k+	27.0%	20.1%	8.2%	9.5%
Total	21.4%	29.4%	7.6%	7.2%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Note: Care should be taken when interpreting Q6 and Q8 due to small sample sizes.

Question 8: (For those who have not received the COVID-19 vaccination)
What would it take for you to get the COVID-19 vaccination? (Note: Details excluded for categories with less than 5% response rate)

Age group (in years)	Doctor recommendation	Additional education	Larger numbers of vaccinations
<35	6.2%	6.7%	3.6%
35 - 64	5.6%	5.9%	5.6%
65+	7.8%	7.1%	3.5%
Total	6.1%	6.3%	4.7%

Education level

HS or Less	7.7%	5.2%	3.3%
Some College/Associate	4.9%	7.5%	5.7%
College+	5.4%	6.2%	5.1%
Total	6.1%	6.3%	4.7%

Generation

Silent Generation	6.2%	4.3%	4.2%
Baby Boomers	7.1%	6.2%	3.7%
Generation X	5.9%	5.7%	6.2%
Millennials	5.9%	6.9%	3.7%
Total	6.1%	6.3%	4.7%

Annual income

<\$25k	7.6%	6.9%	2.3%
\$25k - \$49.9k	5.0%	6.4%	6.1%
\$50k - \$99.9k	5.8%	5.9%	6.2%
\$100k+	7.4%	6.0%	4.3%
Total	6.1%	6.3%	4.7%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Note: Care should be taken when interpreting Q6 and Q8 due to small sample sizes.

Question 8: (For those who have not received the COVID-19 vaccination)
What would it take for you to get the COVID-19 vaccination? (Note: Details excluded for categories with less than 5% response rate)

	Don't know	Friends and family vaccinated	Other	Refused
Total	8.7%	4.4%	3.4%	0.9%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Question 9: Are you comfortable joining a vaccine credentialing system that would allow you to prove your vaccinated status?

Age group (in years)	Yes	No	Don't Know
<35	48.4%	35.5%	14.9%
35 - 64	56.3%	30.4%	12.8%
65+	53.4%	23.4%	21.9%
Total	53.5%	30.2%	15.4%

Education level

HS or Less	40.1%	39.4%	19.6%
Some College/Associate	47.8%	34.3%	17.3%
College+	63.9%	23.1%	12.2%
Total	53.5%	30.2%	15.4%

Generation

Silent Generation	43.7%	24.5%	30.1%
Baby Boomers	52.5%	26.0%	20.6%
Generation X	58.0%	28.9%	12.8%
Millennials	50.3%	35.3%	13.1%
Total	53.5%	30.2%	15.4%

Annual income

<\$25k	38.7%	39.4%	21.1%
\$25k - \$49.9k	51.6%	30.8%	16.1%
\$50k - \$99.9k	55.0%	31.4%	13.2%
\$100k+	69.9%	19.7%	9.9%
Total	53.5%	30.2%	15.4%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Question 10: How concerned are you about catching COVID-19 in 2021?

Age group (in years)	Very Concerned	Somewhat Concerned	A little Concerned	Not at all Concerned
<35	20.4%	23.1%	26.9%	28.0%
35 - 64	29.0%	21.8%	24.7%	23.6%
65+	12.2%	24.2%	34.2%	28.4%
Total	22.9%	22.7%	27.4%	25.9%

Education level

HS or Less	20.9%	18.2%	29.5%	29.6%
Some College/Associate	17.1%	24.5%	28.1%	29.7%
College+	27.4%	23.9%	25.9%	21.7%
Total	22.9%	22.7%	27.4%	25.9%

Generation

Silent Generation	7.3%	20.2%	29.6%	41.8%
Baby Boomers	14.1%	24.8%	33.8%	26.4%
Generation X	32.3%	20.4%	23.7%	22.7%
Millennials	20.8%	23.8%	26.4%	27.6%
Total	22.9%	22.7%	27.4%	25.9%

Annual income

<\$25k	20.9%	22.5%	28.9%	25.7%
\$25k - \$49.9k	19.5%	22.9%	30.4%	26.2%
\$50k - \$99.9k	20.5%	22.7%	27.0%	29.2%
\$100k+	32.6%	21.5%	23.1%	21.9%
Total	22.9%	22.7%	27.4%	25.9%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Question 11: Are you practicing social distancing?

Age group (in years)	Yes	No
<35	86.1%	11.5%
35 - 64	90.1%	9.1%
65+	96.0%	3.7%
Total	90.3%	8.5%

Education level

HS or Less	88.8%	9.8%
Some College/Associate	89.5%	9.4%
College+	91.6%	7.4%
Total	90.3%	8.5%

Generation

Silent Generation	96.7%	3.3%
Baby Boomers	95.6%	4.1%
Generation X	90.5%	8.6%
Millennials	85.6%	12.2%
Total	90.3%	8.5%

Annual income

<\$25k	87.2%	11.1%
\$25k - \$49.9k	91.9%	7.5%
\$50k - \$99.9k	90.1%	8.3%
\$100k+	91.3%	8.1%
Total	90.3%	8.5%

Question 12: Are you wearing a mask in public?

Age group (in years)	Yes	No
<35	92.7%	6.6%
35 - 64	92.8%	6.6%
65+	96.5%	3.4%
Total	93.6%	5.9%

Education level

HS or Less	91.7%	8.3%
Some College/Associate	92.3%	6.9%
College+	95.4%	4.1%
Total	93.6%	5.9%

Generation

Silent Generation	97.2%	2.0%
Baby Boomers	95.7%	4.2%
Generation X	93.7%	5.7%
Millennials	91.7%	7.7%
Total	93.6%	5.9%

Annual income

<\$25k	90.5%	8.8%
\$25k - \$49.9k	93.8%	6.1%
\$50k - \$99.9k	93.8%	5.8%
\$100k+	96.1%	3.3%
Total	93.6%	5.9%

PULSE Health Poll: Vaccine Hesitancy

Fielded April 2021

Question 13: How would you rate your overall mental well-being? Would you say...?

Age group (in years)	Excellent	Very Good	Good	Fair	Poor
<35	22.7%	21.1%	30.1%	17.8%	8.2%
35 - 64	22.6%	30.2%	27.6%	14.6%	4.6%
65+	25.0%	34.1%	30.6%	8.8%	1.3%
Total	23.2%	28.6%	29.0%	14.2%	4.9%

Education level

HS or Less	19.7%	26.4%	31.0%	15.3%	7.4%
Some College/Associate	17.4%	28.5%	31.2%	16.6%	5.8%
College+	28.5%	29.8%	26.5%	12.1%	3.0%
Total	23.2%	28.6%	29.0%	14.2%	4.9%

Generation

Silent Generation	33.9%	33.6%	26.1%	5.8%	0.7%
Baby Boomers	23.4%	34.0%	29.8%	10.6%	2.0%
Generation X	23.2%	31.2%	27.2%	13.3%	4.6%
Millennials	22.1%	21.3%	30.4%	18.5%	7.6%
Total	23.2%	28.6%	29.0%	14.2%	4.9%

Annual income

<\$25k	19.0%	20.8%	29.2%	21.4%	8.9%
\$25k - \$49.9k	17.5%	28.7%	33.0%	14.7%	5.8%
\$50k - \$99.9k	22.1%	32.4%	29.7%	12.5%	3.2%
\$100k+	36.1%	31.0%	22.4%	8.5%	1.9%
Total	23.2%	28.6%	29.0%	14.2%	4.9%

Learn More

Explore other PULSE Health Polls here:
<https://www.ibm.com/watson-health/learn/pulse-health-polls>

© Copyright IBM Corporation 2021.
IBM Corporation, Watson Health,
75 Binney St, Cambridge, MA 02142

Produced in the United States of America,
June 2021.

IBM, the IBM logo, ibm.com, are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions. THE INFORMATION IN THIS DOCUMENT IS PROVIDED "AS IS" WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.