

THE CIVIC HEALTH AND INSTITUTIONS PROJECT



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THE CIVIC HEALTH AND INSTITUTIONS PROJECT: A 50-STATE SURVEY REPORT #102: WHO HAS THE FLU?

USA, February 2024

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THE CIVIC HEALTH AND INSTITUTIONS PROJECT

Report of February 15, 2024, v.1

The Civic Health and Institutions Project

and

The COVID States Project

A joint initiative of:

Northeastern University,

Harvard University,

Rutgers University,

University of Rochester

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The Civic Health and Institutions Project
and
The COVID States Project

Partners:

Northeastern University, Harvard University/Harvard Medical School, Rutgers University, and University of Rochester

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Note on methods:

Between December 21, 2023 and January 29, 2024, we surveyed 30,460 individuals age 18 and older across all 50 states plus the District of Columbia. The survey was conducted by PureSpectrum via an online, nonprobability sample, with state-level representative quotas for race/ethnicity, age, and gender (for more details, see chip50.org and covidstates.org). In addition to balancing on these dimensions, we reweighted our data using demographic characteristics to match the U.S. population with respect to 2020 vote choice and turnout, race/ethnicity, age, gender, education, and living in urban, suburban, or rural areas. This was the latest in a series of surveys we have been conducting since April 2020, examining attitudes and behaviors in the United States.

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Who has the flu?

Early winter 2023-24 spread of flu and COVID-19

Winter 2023-24 has seen an unusual confluence of a variety of respiratory illnesses, ranging from flu to RSV (Respiratory Syncytial Virus) and COVID-19. Between December 21, 2023 and January 29, 2024, we surveyed 30,460 individuals aged 18 and older across all 50 states plus the District of Columbia. We asked them if they had experienced an Influenza-like Illness (ILI) defined as experiencing a fever and cough, or a fever and sore throat, and/or if they had been diagnosed with COVID-19, over the previous month. Amongst those who responded yes to such questions, we asked them whether or not they had sought medical attention. In this report, we summarize our findings across a variety of demographic subgroups, including age, race, education, income, gender, and geography.

KEY FINDINGS

- Approximately 10% of Americans reported experiencing illnesses characterized by cough or sore throat in the month before taking the survey (presumably during December 2023 and January 2024).
- The likelihood of reporting such illnesses varied significantly with age, with younger individuals more frequently indicating they had experienced these symptoms.
- Among those who acknowledged having a fever accompanied by cough or sore throat, about 34% sought advice from medical professionals.
- The inclination to consult healthcare providers also showed age-related variation, with older generations being more prone to seek medical consultation.
- Around 28% of Americans have been tested for COVID-19 since October 1st, 2023, with 6% reporting a positive result. Notably, we do not observe significant variation across age groups in the self-diagnosis of COVID-19.
- Finally, 47% of Americans have received or intend to receive a flu vaccination for the current season. Older individuals are more likely to report having received the flu shot compared to their younger counterparts.

PART I: Respondents with symptoms consistent with an influenza-like illnesses

Respondents with fever and cough or sore throat

During the past month, were you ill or with a fever? Did you also have a cough or sore throat?



National sample, N = 30,460, Time period: 12/21/2023-01/29/2024

Source: The Civic Health and Institutions Project (A joint project of Northeastern University, Harvard University, Rutgers University, and Northwestern University) chip50.org • Created with Datawrapper

Figure 1: Respondents with fever and cough or sore throat

First, we looked at how many people experienced influenza-like illnesses (ILI), defined as fever with cough or fever with sore throat over the prior month. Figure 1 illustrates that approximately 10% of individuals reported experiencing ILI. Note that individuals who reported fever (or illness) without cough or sore throat are classified as "No" in this figure.

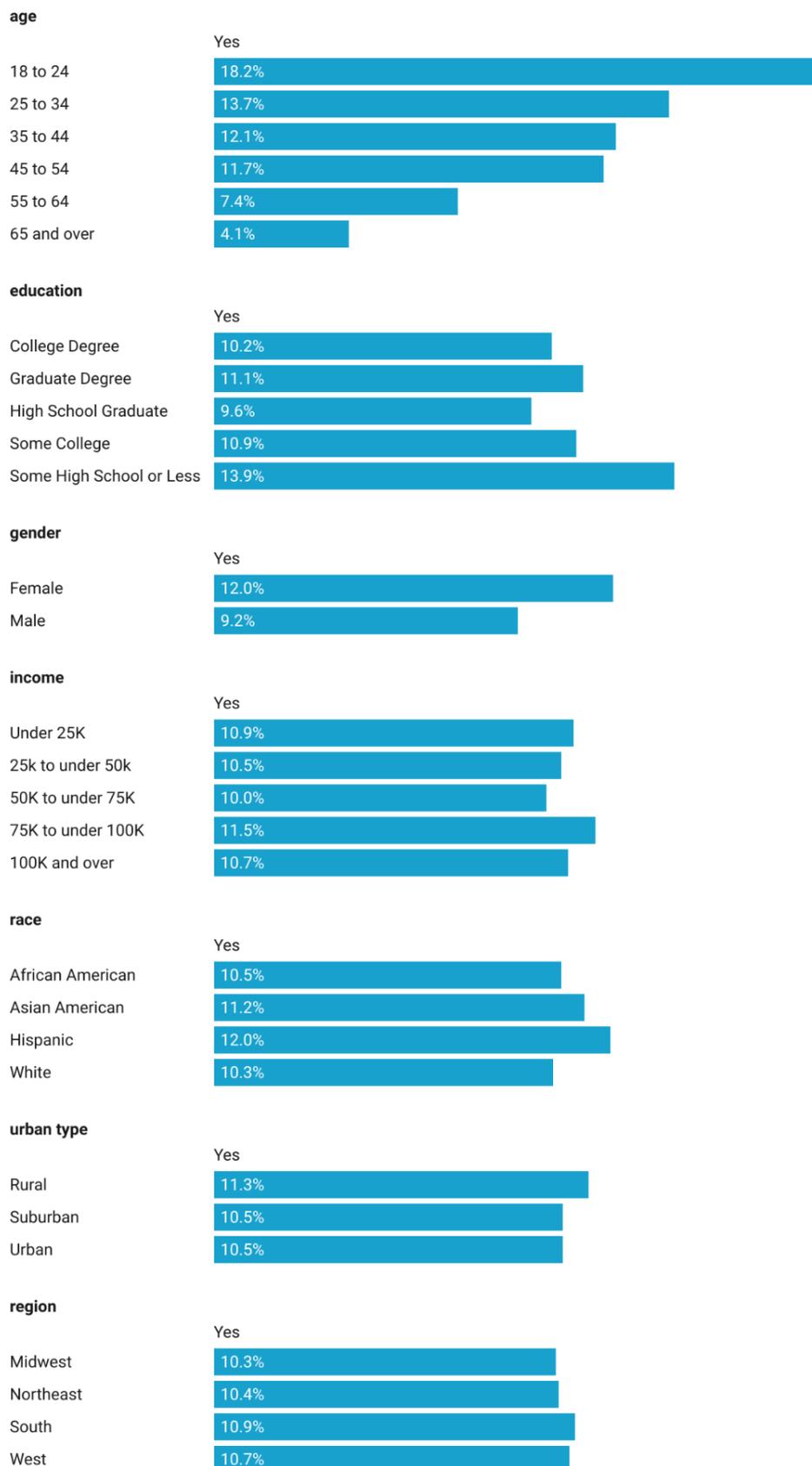
To gain deeper insights into the demographics of people experiencing ILI, we further analyzed the data by dividing the respondents according to various attributes, including age, gender, type of urban residence, income, education, race, and region. The findings are comprehensively presented in Figure 2.

Our analysis revealed significant variations in the likelihood of experiencing ILI across different age groups. As depicted in Figure 2, there is a noticeable decrease in the prevalence of fever with cough or sore throat as age increases. The youngest cohort in our study, those aged 18 to 24, were found to be significantly more affected, with about 18.2% reporting such symptoms, in stark contrast to older groups. The age groups of 25 to 34, 35 to 44, and 45 to 54 years old showed a comparatively lower incidence of these symptoms. Moreover, individuals aged 55 and above exhibited a markedly lower prevalence, with only 7.4% of those aged 55 to 64 and 4.1% of those aged 65 and above reporting symptoms of fever with cough or sore throat.

Gender, race, and education might contribute to the observed heterogeneity as well. According to Figure 2, females were more likely to report illnesses with cough or sore throat (12.0%) than their male counterparts (9.2%).

Respondents with fever and cough or sore throat (by group)

During the past month, were you ill or with a fever? Did you also have a cough or sore throat?



National sample, N = 30,460, Time period: 12/21/2023-01/29/2024

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Figure 2: Respondents with fever and cough or some throat (by group)

Among racial groups, Asian Americans and Hispanics demonstrated a higher propensity for reporting such illnesses, (though, as shown in the appendix, the difference among Asian Americans falls within the margin of error).

In terms of education, respondents with some high school education or less were more likely to experience fever with cough or sore throat (13.9%) compared to other counterparts (10.2% for college degree, 11.1% for graduate degree, 9.6% for high school graduate, 10.9% for some college). Differences across education groups, however, fall within the 3 percentage point margin of error (see appendix). In general, the variations across gender, race, and education are relatively small compared to the variation by age groups. We do not find meaningful variation in the percentages experiencing illness with cough or sore throat by other attributes, including urban type, income, and region.

PART II: Doctor Visits

Of those who had fever and cough or sore throat, how many visited a doctor, nurse, or other health professional

Did you visit a doctor, nurse, or other health professional for this illness?



National sample, N = 30,460, Time period: 12/21/2023-01/29/2024

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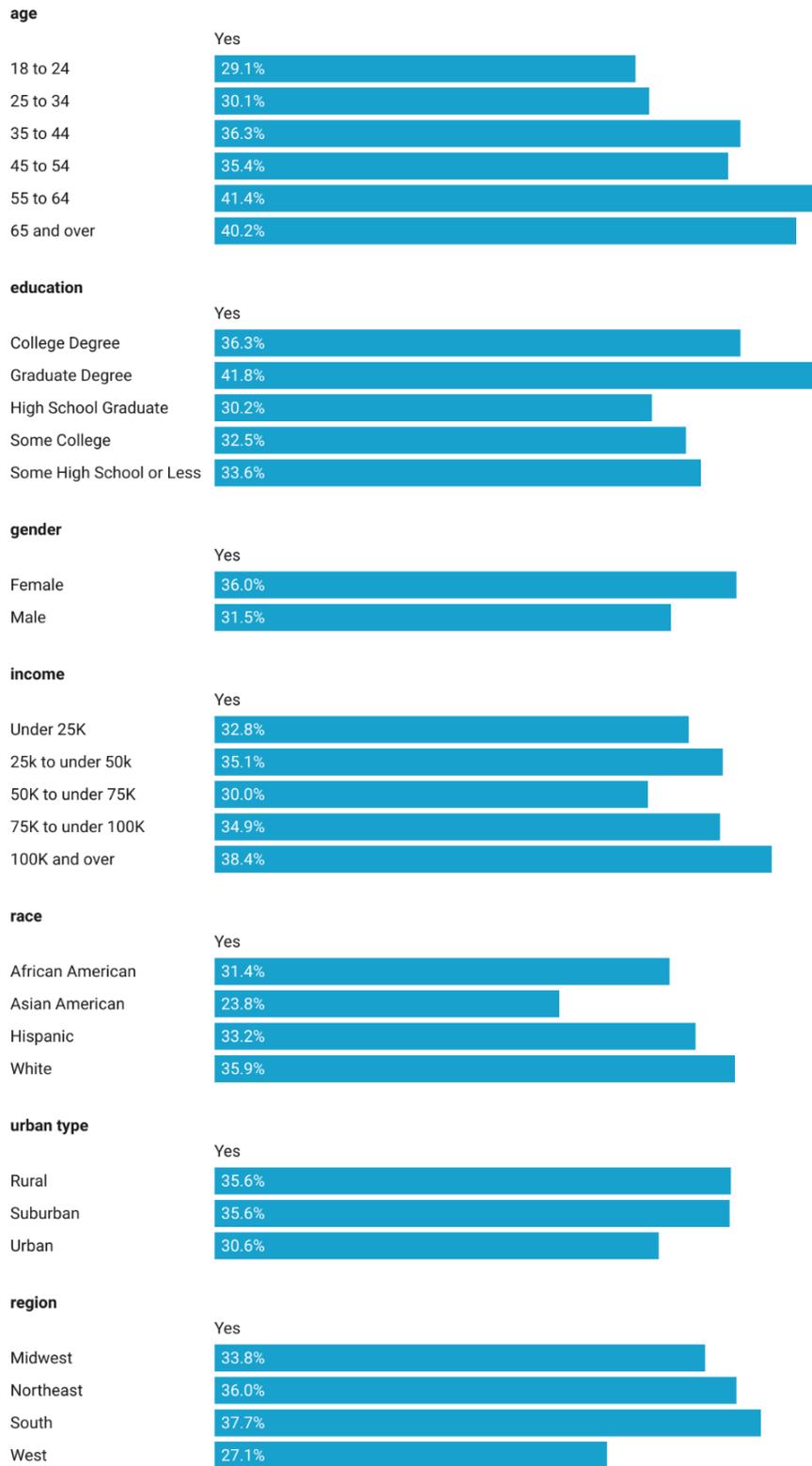
Figure 3: Of those who had fever and cough or sore throat, how many visited a doctor, nurse, or other health professional.

We next investigated how many respondents visited a doctor, nurse, or other health professional among those who reported experiencing ILI. Figure 3 reports that only about one-third (34%) of the 10.6% of respondents who reported being ill also indicated that they visited a doctor, nurse, or other health professional. This number is consistent with previous surveys aiming at characterizing healthcare-seeking behavior in people experiencing ILI symptoms, as documented in *Baltrusaitis et al 2022*¹.

¹ K Baltrusaitis, et al., *Healthcare-Seeking Behavior for Respiratory Illness Among Flu Near You Participants in the United States During the 2015–2016 Through 2018–2019 Influenza Seasons*, *The Journal of Infectious Diseases*, Volume 226, Issue 2 (2022)

Of those who had fever and cough or sore throat, how many visited a doctor, nurse, or other health professional (by group)

Did you visit a doctor, nurse, or other health professional for this illness?



National sample, N = 30,460, Time period: 12/21/2023-01/29/2024

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Figure 4: Of those who had fever and cough or sore throat, how many visited a doctor, nurse, or other health professional (by group)

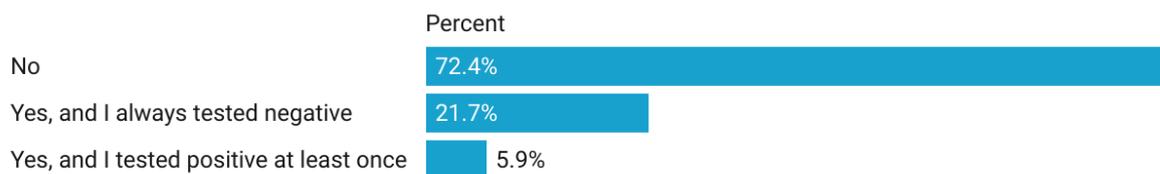
We investigated subgroups of respondents based on various attributes such as age, gender, urban residence type, income, education, race, and region. The detailed results are depicted in Figure 4. This analysis is confined to individuals reporting a fever with cough, resulting in significantly smaller sample sizes for each category. This necessitates a cautious interpretation of the results (see appendix for sample sizes and error margins.)

Our investigation revealed differences across all attributes, especially age. We found that the likelihood of consulting medical professionals *increases* with age, which contrasts with earlier findings where older individuals were *less* prone to experiencing illness with cough or sore throat. A pronounced disparity exists between the youngest cohort in our study and those aged 55 or older: 29.1% of the youngest respondents sought medical advice, a figure that significantly rises to approximately 40% among those 55 and older.

PART III: Self-Diagnosis of COVID-19

Self-Diagnosis

Have you been tested for COVID-19 since October 1, 2023?



National sample, N = 30,460, Time period: 12/21/2023-01/29/2024

Source: The Civic Health and Institutions Project (A joint project of Northeastern University, Harvard University, Rutgers University, and Northwestern University) chip50.org • Created with Datawrapper

Figure 5: Self-diagnosis of COVID-19

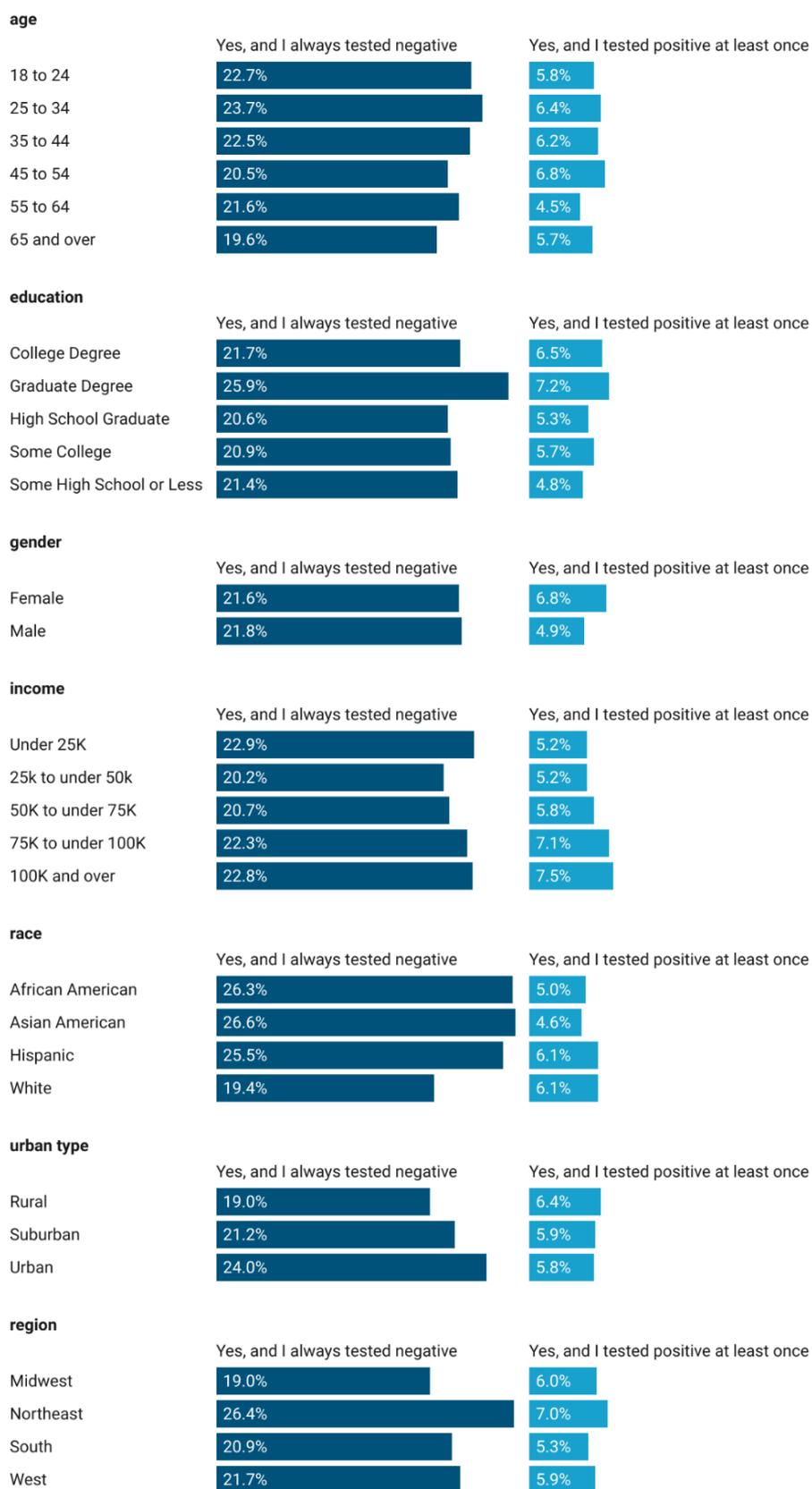
We extended our inquiry to include whether respondents had recently been tested for COVID-19 and, if so, whether their test results were positive or negative. The findings are illustrated in Figure 5.

We found that 17.6% of all respondents had undergone COVID-19 testing since October 2023, with 5.9% reporting at least one positive test result. (Note that this question was posed to all participants, differing from the approach in part II.)

We examined the variation in responses across different demographics, including age, gender, urban residence type, income, education, race, and region. The aggregate results are depicted in Figure 6.

Self-Diagnosis (by group)

Have you been tested for COVID-19 since October 1, 2023?



National sample, N = 30,460, Time period: 12/21/2023-01/29/2024

Source: The Civic Health and Institutions Project (A joint project of Northeastern University, Harvard University, Rutgers University, and Northwestern University) chip50.org · Created with Datawrapper

Figure 6: Self-diagnosis of COVID-19 (by group)

Figure 6 reveals that age-related variations were not as marked for this question as they were for the previous two. Although differences were observed between the youngest and oldest age cohorts, the pattern of self-diagnosis did not demonstrate consistent trends across generations.

Conversely, some variations were detected regarding race, urban residence type, and geographical regions. In terms of race, White individuals were less likely to report self-diagnosis for COVID-19 compared to other racial groups (74.5% of White respondents answered "No" to testing, versus 68.4% for Hispanics, 68.8% for Asian Americans, and 68.7% for African Americans).

Interestingly, among those who self-diagnosed, White respondents were less likely to report uniformly negative test results (19.4% for Whites, compared to 26.3% for African Americans, 26.6% for Asian Americans, and 25.5% for Hispanics).

Regional differences also emerged, with the Northeast showing a higher incidence of self-diagnosis for COVID-19 than other regions (33.4% in the Northeast, compared to 25.0% in the Midwest, 26.3% in the South, and 27.6% in the West).

The Northeast also had a higher likelihood of respondents testing negative in all instances. In terms of urban residence, individuals living in urban areas were more likely to self-diagnose and receive negative test results (24.0% in urban areas, 21.2% in suburban areas, and 19.0% in rural areas).

It is crucial to highlight that the variation is predominantly observed in responses to "No" and "Yes, and I always tested negative," with the percentage of respondents reporting at least one positive test result remaining relatively stable across all categories, consistently at around 6%.

PART IV: Flu shot status

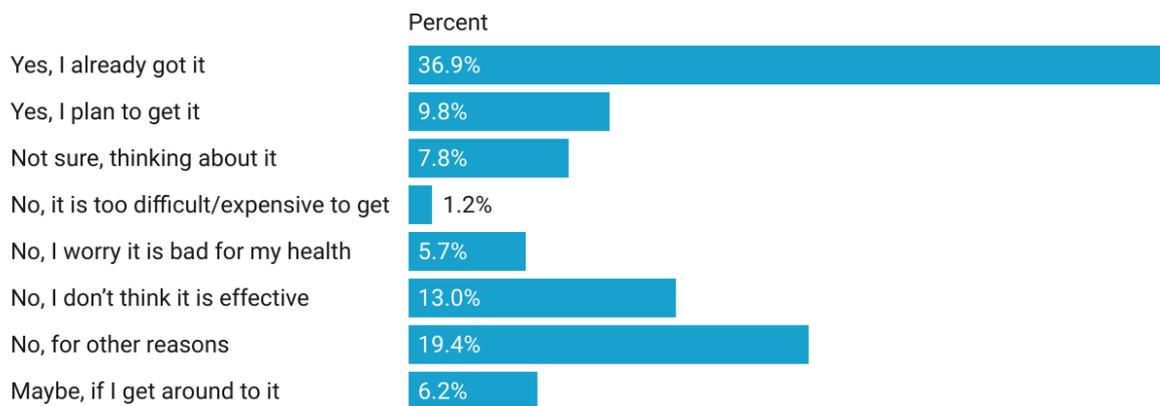
Lastly, we reviewed the respondents' flu shot status in our sample. The result is summarized in Figure 7 for overall population. In our sample, 46.7% of the respondents have received or plan to get a flu shot.

In light of the significant variations observed across different age groups, we expanded our investigation to include flu vaccination status, focusing on age-related heterogeneity. The findings are presented in Figure 8. As shown, there is a clear trend indicating that older generations are more likely to have received flu vaccinations. While less than 30% of the younger population reported receiving a flu shot (28.0% for those aged 18 to 24, 25.5% for those aged 25 to 34, and 25.4% for those aged 35 to 44), the vaccination rate significantly increases for individuals aged 65 and over, reaching 64.1%. These results

suggest that health-seeking behaviors differ by age. However, it's important to note that the data presented here are descriptive and do not establish causality. Therefore, further research is required to fully understand these patterns.

Flu Shot Status

Have you or will you get a flu shot this season?



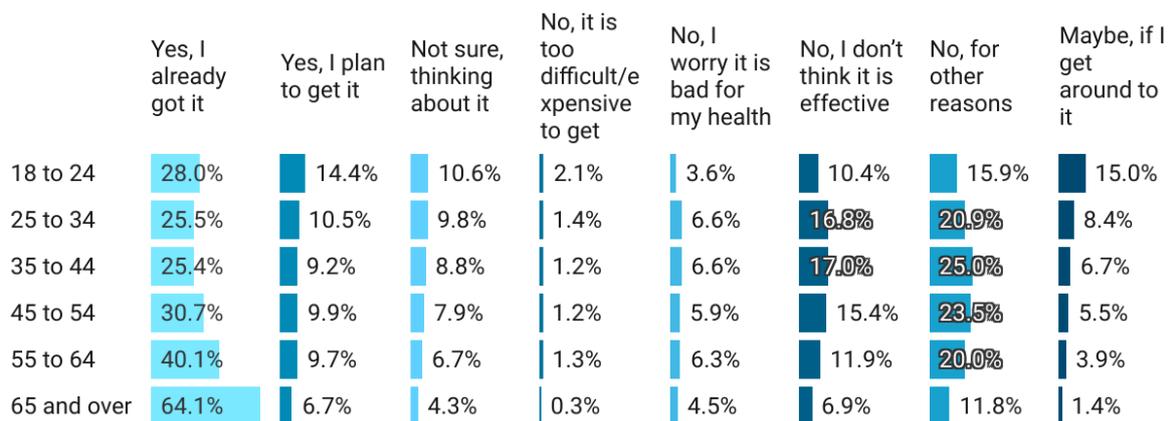
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Figure 7: Flu Shot Status

Flu Shot Status (by age)

Have you or will you get a flu shot this season?



National sample, N = 30,460, Time period: 12/21/2023-01/29/2024

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Figure 8: Flu Shot Status by Age

Appendix A

In this appendix, we report the percentage and margin of errors (MOE) for each item for all subgroup analyses. We also report the number of samples in each category. All numbers reported are rounded.

PART I: Respondents with Fever and Cough Or Sore Throat

Age	No	Yes	MOE (No)	MOE (Yes)	N
18 to 24	82	18	2	2	3547
25 to 34	86	14	1	1	5612
35 to 44	88	12	1	1	5148
45 to 54	88	12	1	1	4882
55 to 64	93	7	1	1	5045
65 and over	96	4	1	1	6226

Education	No	Yes	Moe (No)	Moe (Yes)	N
Some High School or Less	86	14	3	3	2407
High School Graduate	90	10	1	1	8678
Some College	89	11	1	1	8417
College Degree	90	10	1	1	7031
Graduate Degree	89	11	1	1	3927

Gender	No	Yes	Moe (No)	Moe (Yes)	N
Female	88	12	1	1	15690
Male	91	9	1	1	14771

Income	No	Yes	Moe (No)	Moe (Yes)	N
Under 25K	89	11	1	1	7933
25k to under 50k	90	10	1	1	8355
50K to under 75K	90	10	1	1	5641
75K to under 100K	88	12	1	1	3447
100K and over	89	11	1	1	5081

Race	No	Yes	Moe (No)	Moe (Yes)	N
African American	90	10	1	1	3772
Asian American	89	11	3	3	1764
Hispanic	88	12	1	1	4915
White	90	10	1	1	19699

Region	No	Yes	Moe (No)	Moe (Yes)	N
Northeast	90	10	1	1	5400
Midwest	90	10	1	1	6408
South	89	11	1	1	11455
West	89	11	1	1	7197

Urban Type	No	Yes	Moe (No)	Moe (Yes)	N
Urban	89	11	1	1	9145
Suburban	89	11	1	1	16759
Rural	89	11	1	1	4557

PART II: Doctor Visits

Age	Yes	No	Moe (Yes)	Moe (No)	N
18 to 24	29	71	5	5	644
25 to 34	30	70	4	4	769
35 to 44	36	64	5	5	625
45 to 54	35	65	5	5	568
55 to 64	41	59	7	7	369
65 and over	40	60	8	8	254

Education	Yes	No	Moe (Yes)	Moe (No)	N
Some High School or Less	34	66	9	9	334
High School Graduate	30	70	4	4	826
Some College	33	67	4	4	919
College Degree	36	64	4	4	715
Graduate Degree	42	58	6	6	435

Income	Yes	No	Moe (Yes)	Moe (No)	N
Under 25K	33	67	4	4	855
25k to under 50k	35	65	4	4	874
50K to under 75K	30	70	5	5	562
75K to under 100K	35	65	6	6	395
100K and over	38	62	5	5	542

Gender	Yes	No	Moe (Yes)	Moe (No)	N
Female	36	64	3	3	1880
Male	31	69	4	4	1349

Race	Yes	No	Moe (Yes)	Moe (No)	N
African American	31	69	6	6	393
Asian American	24	76	10	10	197
Hispanic	33	67	6	6	588
White	36	64	3	3	2012

Region	Yes	No	Moe (Yes)	Moe (No)	N
Northeast	36	64	5	5	561
Midwest	34	66	4	4	658
South	38	62	3	3	1243
West	27	73	4	4	766

Urban Type	Yes	No	Moe (Yes)	Moe (No)	N
Urban	31	69	4	4	958
Suburban	36	64	3	3	1758
Rural	36	64	4	4	514

PART III: Self-Diagnosis

Age	No	Yes and Negative	Yes and Positive	Moe (No)	Moe (Yes and Negative)	Moe (Yes and Positive)	N
18 to 24	72	23	6	2	2	1	3547
25 to 34	70	24	6	2	2	1	5609
35 to 44	71	23	6	2	1	1	5146
45 to 54	73	21	7	2	1	1	4880
55 to 64	74	22	5	2	2	1	5039
65 and over	75	20	6	1	1	1	6222

Education	No	Yes and Negative	Yes and Positive	Moe (No)	Moe (Yes and Negative)	Moe (Yes and Positive)	N
Some High School or Less	74	21	5	3	3	2	2406
High School Graduate	74	21	5	1	1	1	8674
Some College	73	21	6	1	1	1	8410
College Degree	72	22	6	1	1	1	7028
Graduate Degree	67	26	7	2	2	1	3926

Gender	No	Yes and Negative	Yes and Positive	Moe (No)	Moe (Yes and Negative)	Moe (Yes and Positive)	N
Female	72	22	7	1	1	0	15675
Male	73	22	5	1	1	1	14768

Income	No	Yes and Negative	Yes and Positive	Moe (No)	Moe (Yes and Negative)	Moe (Yes and Positive)	N
Under 25K	72	23	5	1	1	1	7925
25k to under 50k	75	20	5	1	1	1	8352
50K to under 75K	74	21	6	1	1	1	5638
75K to under 100K	71	22	7	2	2	1	3445
100K and over	70	23	7	2	1	1	5079

Race	No	Yes and Negative	Yes and Positive	Moe (No)	Moe (Yes and Negative)	Moe (Yes and Positive)	N
African American	69	26	5	2	2	1	3769
Asian American	69	27	5	4	4	2	1762
Hispanic	68	25	6	2	2	1	4915
White	74	19	6	1	1	0	19688

Region	No	Yes and Negative	Yes and Positive	Moe (No)	Moe (Yes and Negative)	Moe (Yes and Positive)	N
Northeast	67	26	7	2	2	1	5395
Midwest	75	19	6	1	1	1	6406
South	74	21	5	1	1	1	11449
West	72	22	6	1	1	1	7193

Urban Type	No	Yes and Negative	Yes and Positive	Moe (No)	Moe (Yes and Negative)	Moe (Yes and Positive)	N
Urban	70	24	6	1	1	1	9141
Suburban	73	21	6	1	1	0	16748
Rural	75	19	6	1	1	1	4554

PART IV: Flu Shot Status

Ages	Flu Shot Status	Percent	Moe	n
18 to 24	Yes, I already got it	28	2	3547
	Yes, I plan to get it	14	2	3547
	Maybe, if I get around to it	15	2	3547
	Not sure, thinking about it	11	1	3547
	No, it is too difficult/expensive to get	2	1	3547
	No, I worry it is bad for my health	4	1	3547
	No, I don't think it is effective	10	1	3547
	No, for other reasons	16	2	3547

25 to 34	Yes, I already got it	25	2	5612
	Yes, I plan to get it	11	1	5612
	Maybe, if I get around to it	8	1	5612
	Not sure, thinking about it	10	1	5612
	No, it is too difficult/expensive to get	1	0	5612
	No, I worry it is bad for my health	7	1	5612
	No, I don't think it is effective	17	1	5612
	No, for other reasons	21	1	5612
35 to 44	Yes, I already got it	25	1	5144
	Yes, I plan to get it	9	1	5144
	Maybe, if I get around to it	7	1	5144
	Not sure, thinking about it	9	1	5144
	No, it is too difficult/expensive to get	1	0	5144
	No, I worry it is bad for my health	7	1	5144
	No, I don't think it is effective	17	1	5144
	No, for other reasons	25	1	5144
45 to 54	Yes, I already got it	31	2	4882
	Yes, I plan to get it	10	1	4882
	Maybe, if I get around to it	5	1	4882
	Not sure, thinking about it	8	1	4882
	No, it is too difficult/expensive to get	1	0	4882
	No, I worry it is bad for my health	6	1	4882
	No, I don't think it is effective	15	1	4882
	No, for other reasons	23	2	4882

55 to 64	Yes, I already got it	40	2	5042
	Yes, I plan to get it	10	1	5042
	Maybe, if I get around to it	4	1	5042
	Not sure, thinking about it	7	1	5042
	No, it is too difficult/expensive to get	1	0	5042
	No, I worry it is bad for my health	6	1	5042
	No, I don't think it is effective	12	1	5042
	No, for other reasons	20	2	5042
65 and over	Yes, I already got it	64	2	6225
	Yes, I plan to get it	7	1	6225
	Maybe, if I get around to it	1	0	6225
	Not sure, thinking about it	4	1	6225
	No, it is too difficult/expensive to get	0	0	6225
	No, I worry it is bad for my health	4	1	6225
	No, I don't think it is effective	7	1	6225
	No, for other reasons	12	1	6225