



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

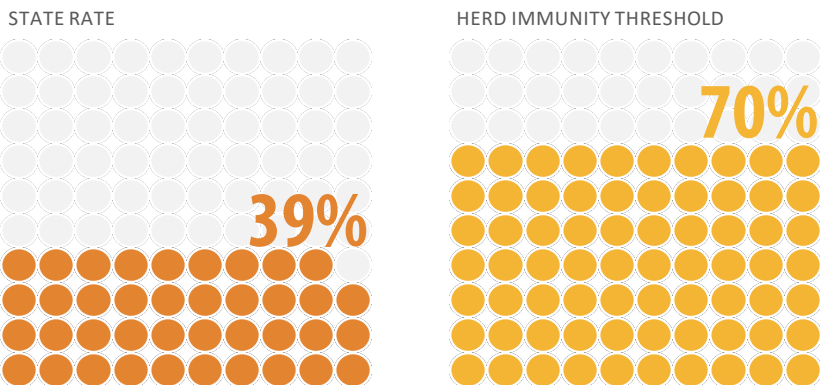
SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

## United States

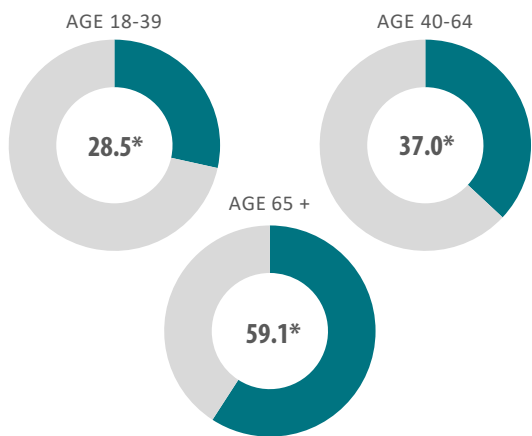
Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

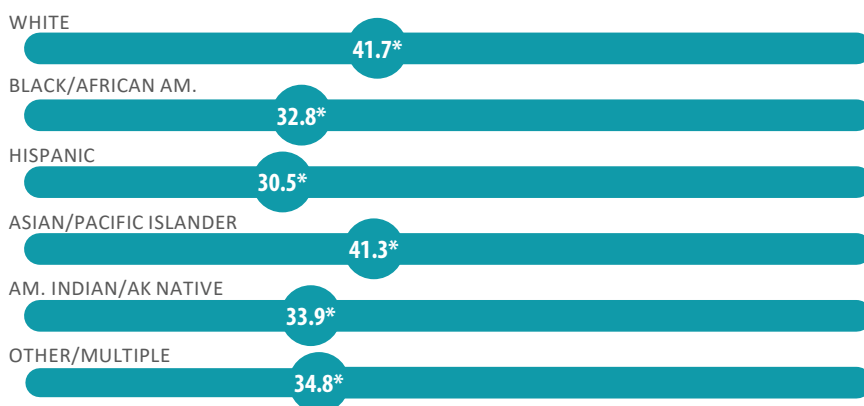
### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold



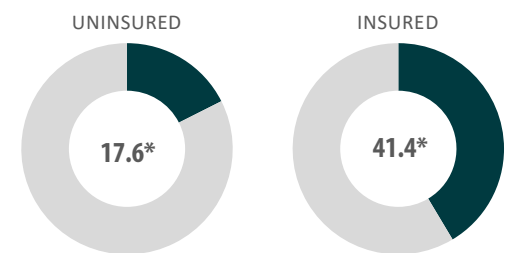
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

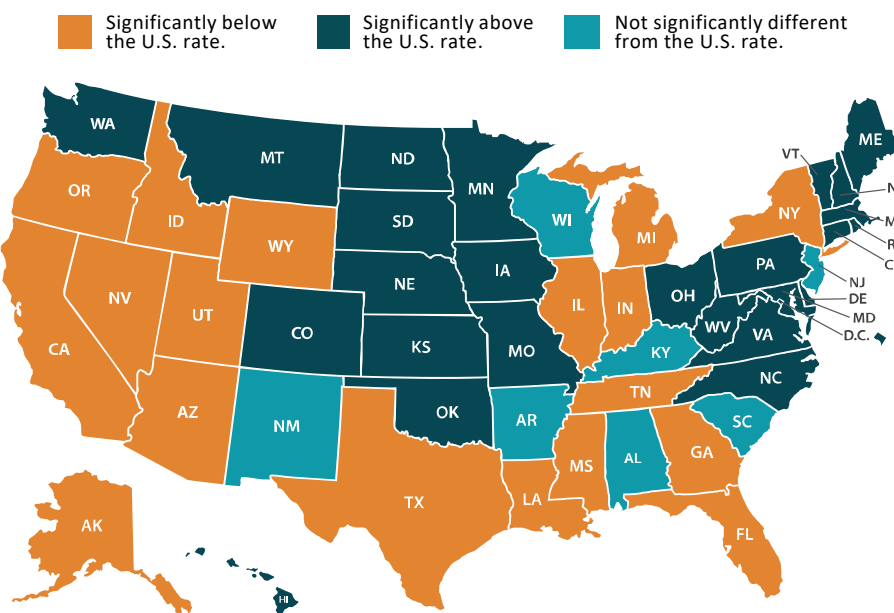
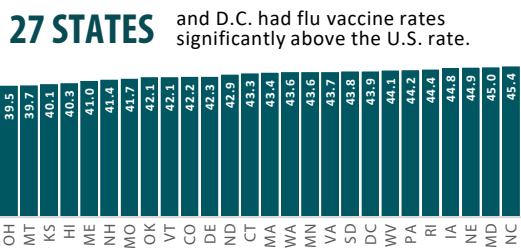
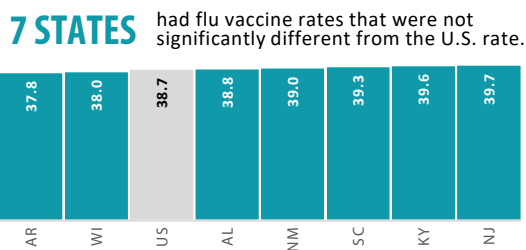
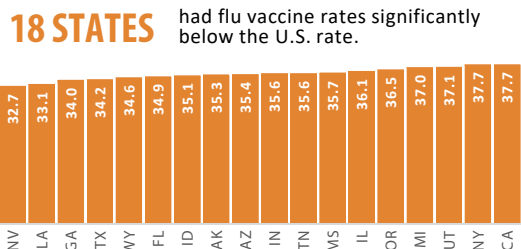


### Flu Vaccination Rates by Household Income



\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

United States	United States	
	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	38.7	
<b>Age</b>		
18-39	28.5	-10.2*
40-64	37.2	-1.5*
65+	59.4	20.7*
<b>Race/Ethnicity</b>		
White	41.7	3.0*
Black/African American	32.8	-5.9*
Hispanic	30.9	-7.7*
Asian/Pacific Islander	41.4	2.7*
American Indian/Alaska Native	33.9	-4.8*
Other/multiple	34.9	-3.8*
<b>Sex</b>		
Male	35.4	-3.3*
Female	41.8	3.1*
<b>Chronic Condition Status</b>		
No chronic conditions	35.4	-3.3*
1+ chronic conditions	49.1	10.5*
<b>Health Insurance Coverage</b>		
Uninsured	17.6	-21.1*
Insured	41.6	2.9*
<b>Access to Care</b>		
No personal doctor	20.1	-18.6*
Has personal doctor	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>		
<i>All Adults Age 25+</i>	40.2	
Less than high school	34.0	-6.1*
High school graduate	35.6	-4.6*
Some college or associate's degree	38.8	-1.4*
Bachelor's degree or higher	47.9	9.2*
<b>Household Income</b>		
Less than \$25,000	34.8	-3.9*
\$25,000 to \$49,999	36.5	-2.2*
\$50,000 to \$74,999	38.6	-0.1
\$75,000 or more	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level.  
 Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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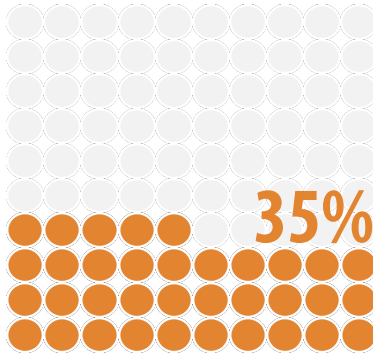
## Alaska

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

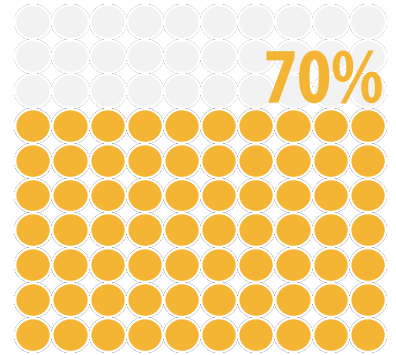
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

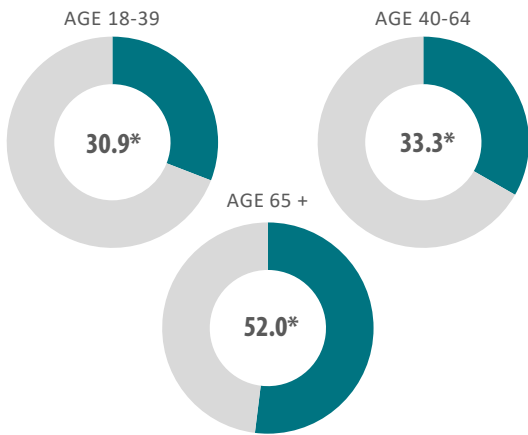
STATE RATE



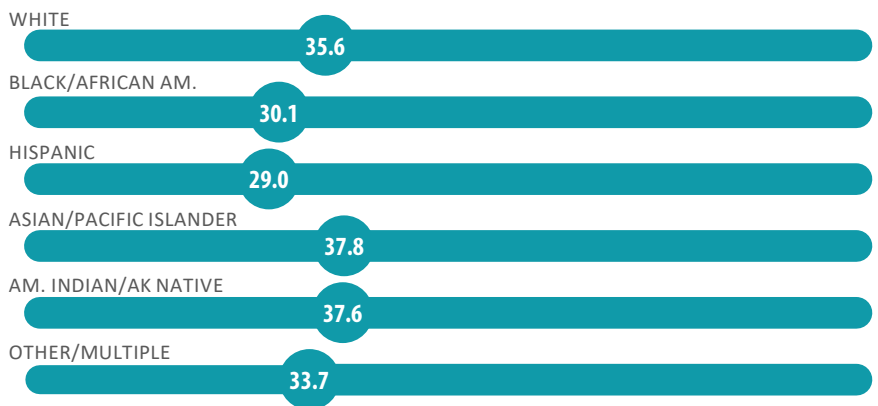
HERD IMMUNITY THRESHOLD



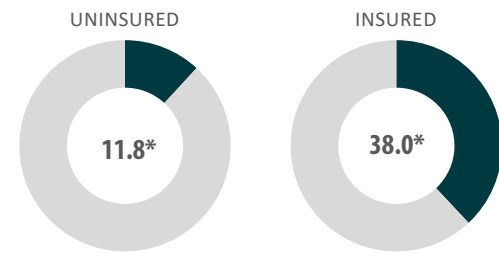
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status



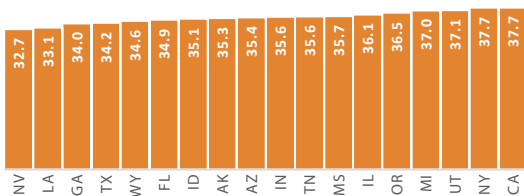
### Flu Vaccination Rates by Household Income



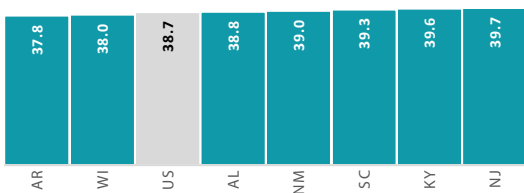
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates

**18 STATES** had flu vaccine rates significantly below the U.S. rate.



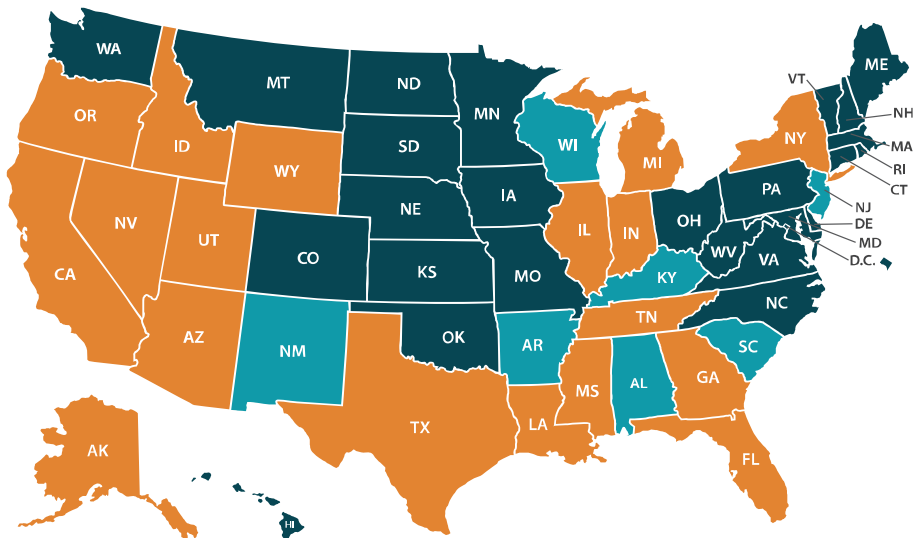
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Alaska	Alaska			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	35.3		-3.4*	38.7	
<b>Age</b>					
18-39	30.9	-4.4*	2.4	28.5	-10.2*
40-64	33.3	-2.0*	-3.9*	37.2	-1.5*
65+	52.0	16.7*	-7.4*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	35.6	0.3	-6.1*	41.7	3.0*
Black/African American	30.1	-5.1	-2.6	32.8	-5.9*
Hispanic	29.0	-6.3	-2.0	30.9	-7.7*
Asian/Pacific Islander	37.8	2.5	-3.6	41.4	2.7*
American Indian/Alaska Native	37.6	2.4	3.7	33.9	-4.8*
Other/multiple	33.7	-1.6	-1.2	34.9	-3.8*
<b>Sex</b>					
Male	32.9	-2.4*	-2.5*	35.4	-3.3*
Female	37.6	2.4*	-4.2*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	33.7	-1.6*	-1.7	35.4	-3.3*
1+ chronic conditions	41.4	6.1*	-7.8*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	11.8	-23.4*	-5.7*	17.6	-21.1*
Insured	38.0	2.7*	-3.6*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	23.4	-11.9*	3.2*	20.1	-18.6*
Has personal doctor	41.1	5.8*	-3.0*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	35.5		-4.6*	40.2	
Less than high school	24.0	-11.6*	-10.1*	34.0	-6.1*
High school graduate	29.3	-6.2*	-6.3*	35.6	-4.6*
Some college or associate's degree	32.2	-3.3*	-6.5*	38.8	-1.4*
Bachelor's degree or higher	48.2	15.9*	0.2	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	26.7	-8.5*	-8.0*	34.8	-3.9*
\$25,000 to \$49,999	31.9	-3.4*	-4.6*	36.5	-2.2*
\$50,000 to \$74,999	37.7	2.4*	-0.9	38.6	-0.1
\$75,000 or more	40.0	4.7*	-2.8*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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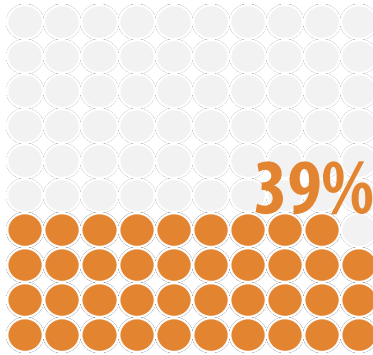
## Alabama

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

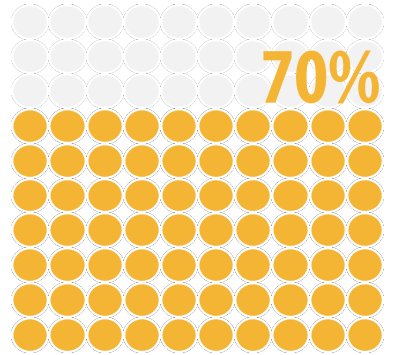
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

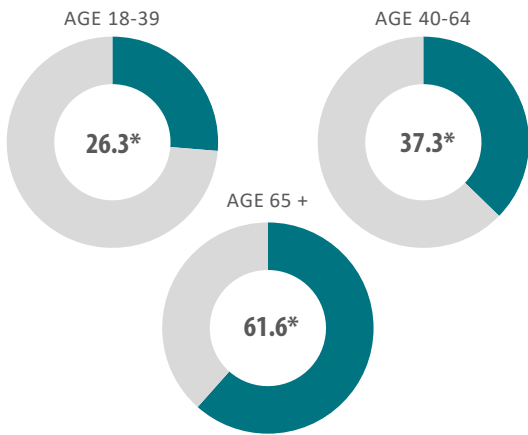
STATE RATE



HERD IMMUNITY THRESHOLD



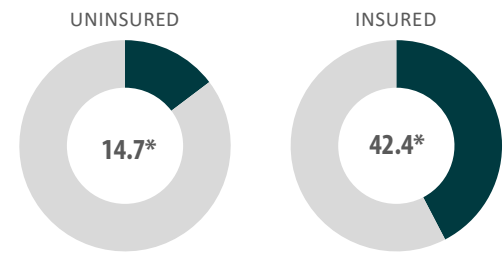
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

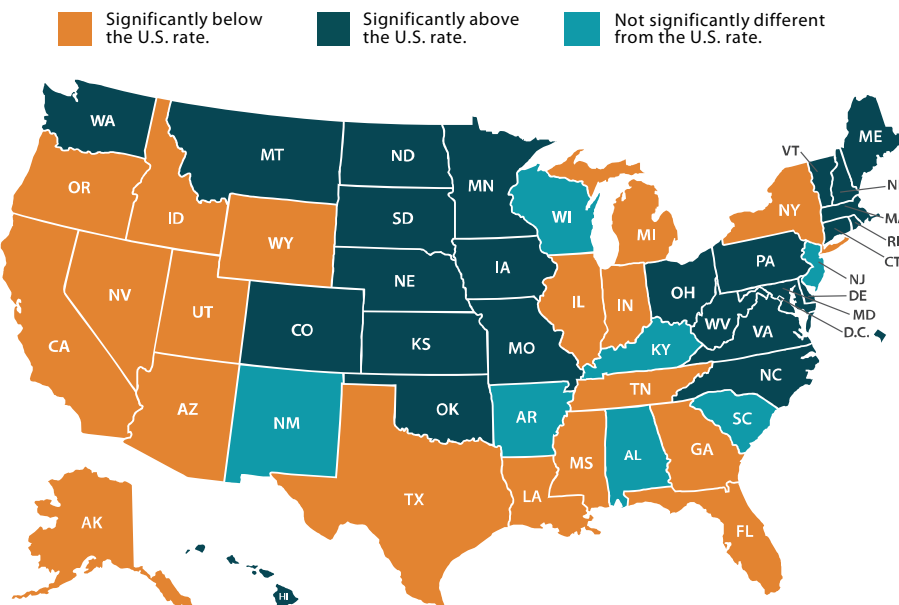
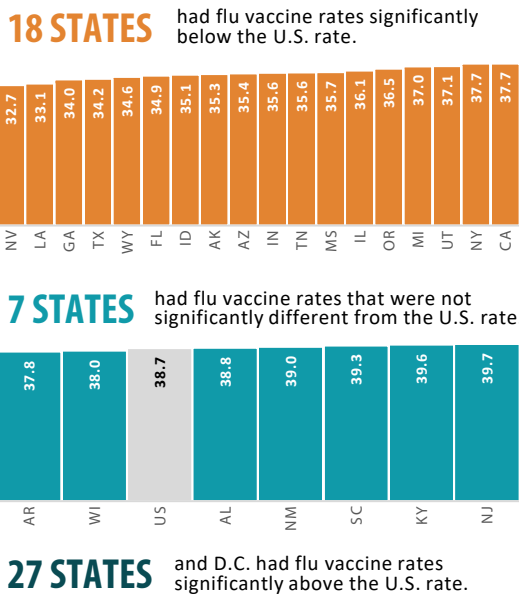


### Flu Vaccination Rates by Household Income



\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



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Alabama	Alabama			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	38.8		0.1	38.7	
<b>Age</b>					
18-39	26.3	-12.5*	-2.2*	28.5	-10.2*
40-64	37.3	-1.5*	0.1	37.2	-1.5*
65+	61.6	22.8*	2.2*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	41.3	2.5*	-0.4	41.7	3.0*
Black/African American	33.4	-5.4*	0.6	32.8	-5.9*
Hispanic	36.2	-2.6	5.2	30.9	-7.7*
Asian/Pacific Islander	32.8	-6.0	-8.6	41.4	2.7*
American Indian/Alaska Native	28.6	-10.2*	-5.3	33.9	-4.8*
Other/multiple	32.2	-6.5*	-2.6	34.9	-3.8*
<b>Sex</b>					
Male	36.2	-2.6*	0.8	35.4	-3.3*
Female	41.0	2.3*	-0.8	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	34.7	-4.1*	-0.8	35.4	-3.3*
1+ chronic conditions	48.7	10.0*	-0.4	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	14.7	-24.1*	-2.9*	17.6	-21.1*
Insured	42.4	3.6*	0.7	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	19.4	-19.4*	-0.7	20.1	-18.6*
Has personal doctor	44.1	5.3*	0.0	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	40.1		-0.1	40.2	
Less than high school	36.2	-3.9*	2.2	34.0	-6.1*
High school graduate	37.0	-3.1*	1.4	35.6	-4.6*
Some college or associate's degree	38.8	-1.3	0.0	38.8	-1.4*
Bachelor's degree or higher	48.0	8.0*	0.1	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	35.1	-3.7*	0.3	34.8	-3.9*
\$25,000 to \$49,999	37.5	-1.3	1.0	36.5	-2.2*
\$50,000 to \$74,999	39.6	0.8	1.0	38.6	-0.1
\$75,000 or more	42.3	3.5*	-0.5	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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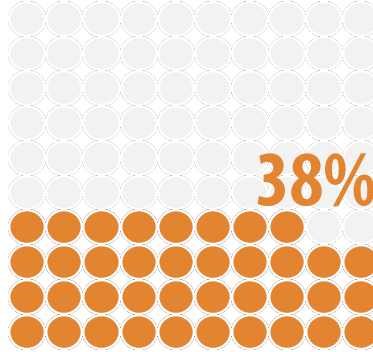
## Arkansas

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

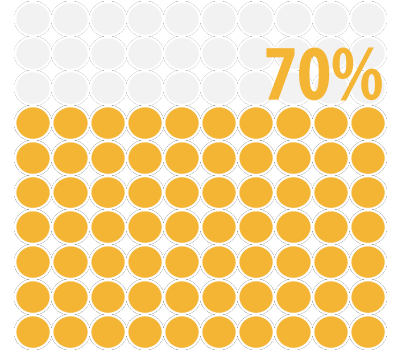
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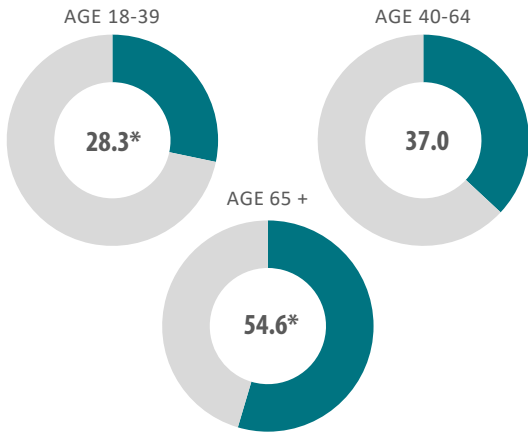
STATE RATE



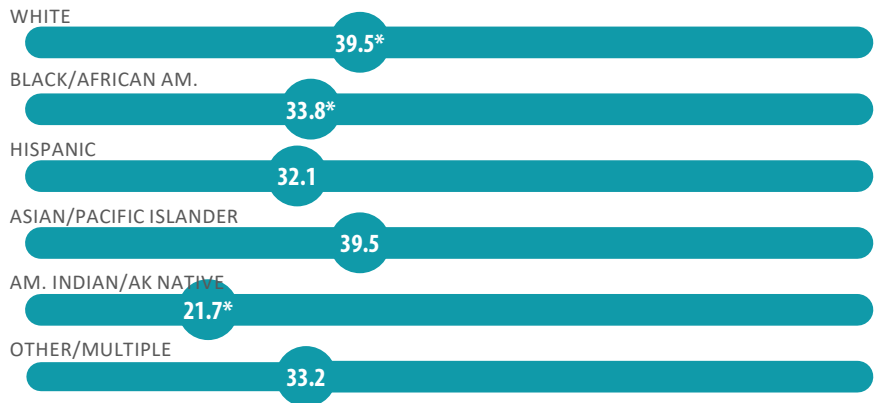
HERD IMMUNITY THRESHOLD



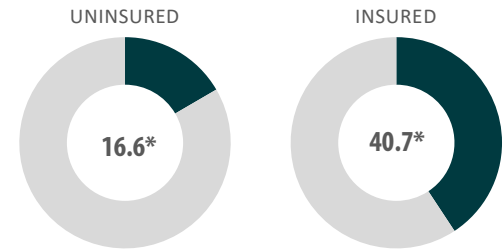
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

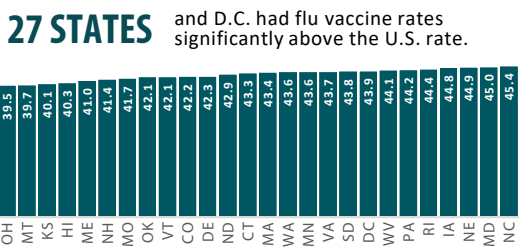
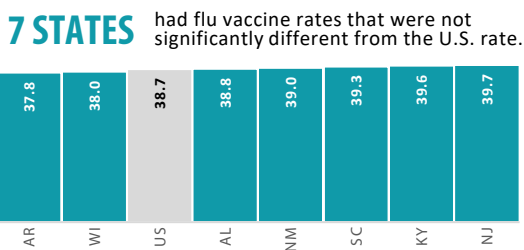
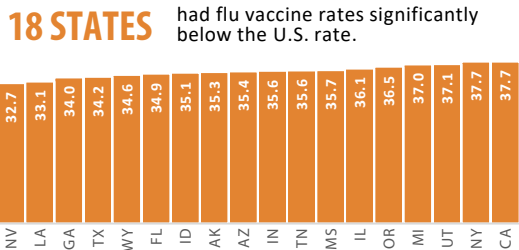


### Flu Vaccination Rates by Household Income

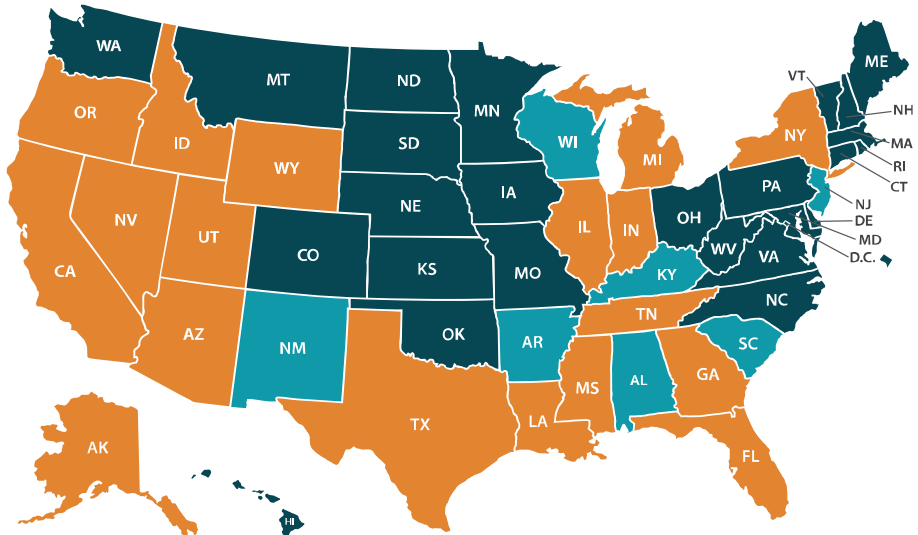


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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Arkansas	Arkansas			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	37.8		-0.9	38.7	
<b>Age</b>					
18-39	28.3	-9.5*	-0.2	28.5	-10.2*
40-64	37.0	-0.8	-0.2	37.2	-1.5*
65+	54.6	16.8*	-4.8*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	39.5	1.8*	-2.2*	41.7	3.0*
Black/African American	33.8	-4.0*	1.0	32.8	-5.9*
Hispanic	32.1	-5.6	1.2	30.9	-7.7*
Asian/Pacific Islander	39.5	1.8	-1.9	41.4	2.7*
American Indian/Alaska Native	21.7	-16.1*	-12.2*	33.9	-4.8*
Other/multiple	33.2	-4.6	-1.7	34.9	-3.8*
<b>Sex</b>					
Male	33.2	-4.6*	-2.2*	35.4	-3.3*
Female	42.2	4.4*	0.4	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	35.0	-2.8*	-0.4	35.4	-3.3*
1+ chronic conditions	45.0	7.2*	-4.2*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	16.6	-21.2*	-1.0	17.6	-21.1*
Insured	40.7	3.0*	-0.9	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	19.2	-18.6*	-1.0	20.1	-18.6*
Has personal doctor	42.3	4.5*	-1.8*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	39.1		-1.0	40.2	
Less than high school	34.8	-4.3*	0.8	34.0	-6.1*
High school graduate	36.5	-2.6*	0.9	35.6	-4.6*
Some college or associate's degree	36.7	-2.4*	-2.1	38.8	-1.4*
Bachelor's degree or higher	49.4	12.7*	1.4	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	32.7	-5.0*	-2.0*	34.8	-3.9*
\$25,000 to \$49,999	36.2	-1.6	-0.3	36.5	-2.2*
\$50,000 to \$74,999	39.6	1.9	1.1	38.6	-0.1
\$75,000 or more	44.8	7.0*	2.0	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

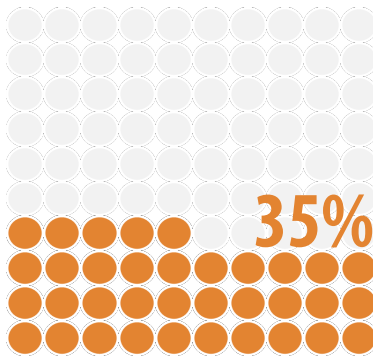
## Arizona

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

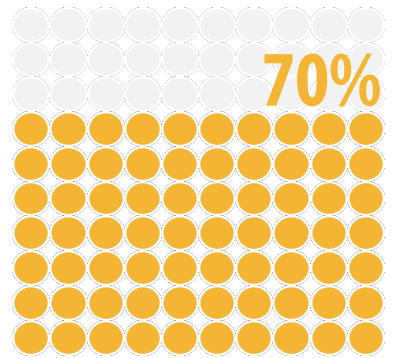
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

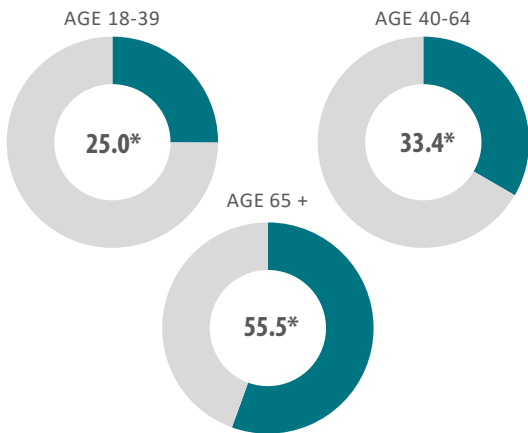
STATE RATE



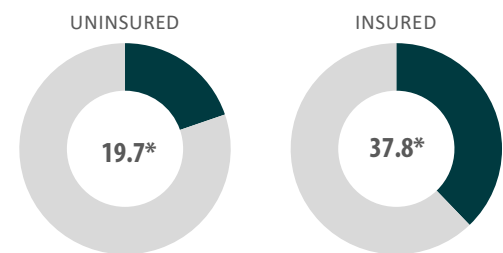
HERD IMMUNITY THRESHOLD



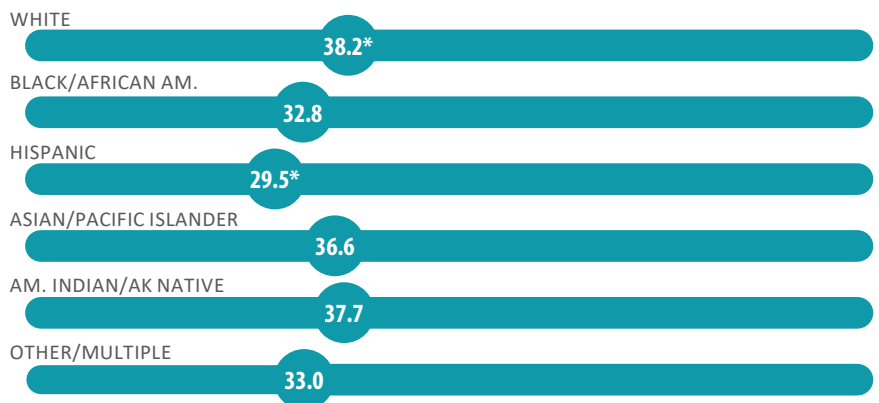
### Flu Vaccination Rates by Age



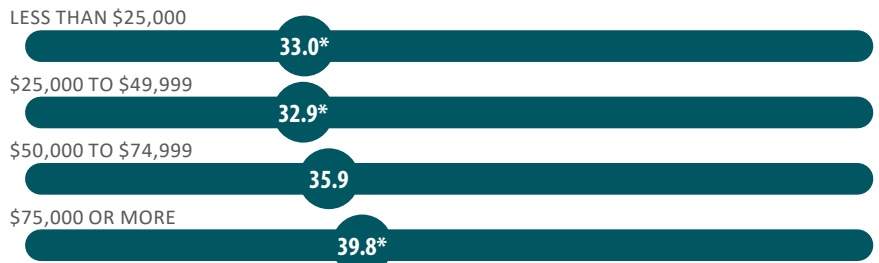
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

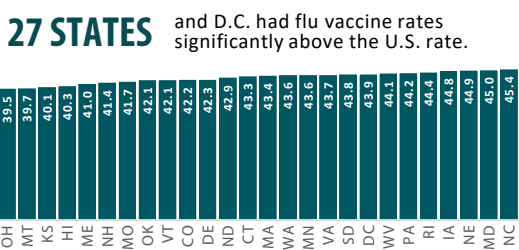
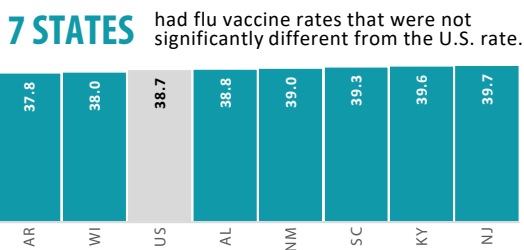
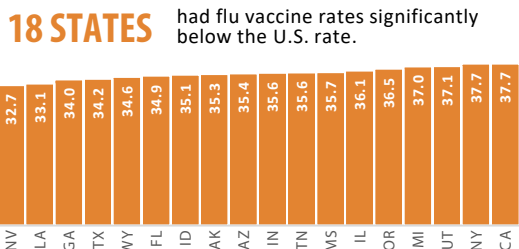


### Flu Vaccination Rates by Household Income

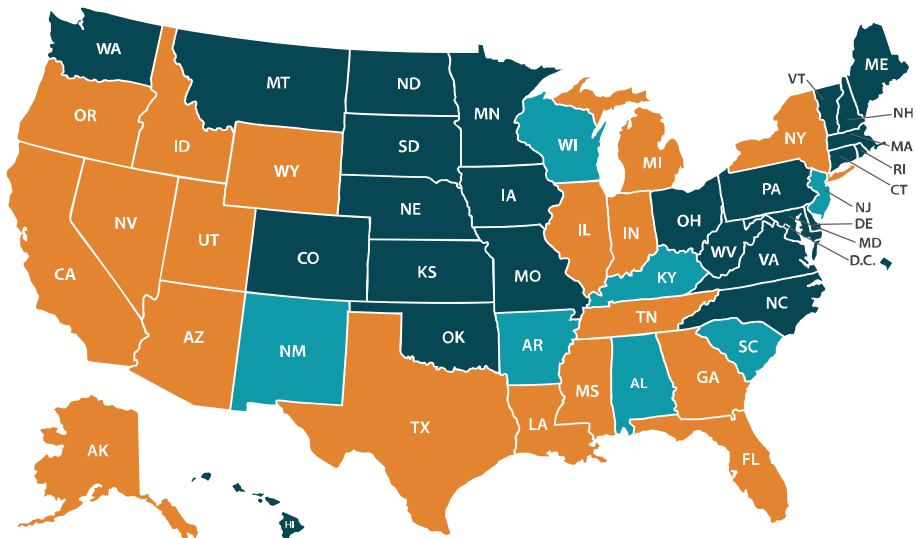


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Arizona	Arizona			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	35.4		-3.3*	38.7	
<b>Age</b>					
18-39	25.0	-10.4*	-3.5*	28.5	-10.2*
40-64	33.4	-2.0*	-3.8*	37.2	-1.5*
65+	55.5	20.1*	-3.9*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	38.2	2.8*	-3.5*	41.7	3.0*
Black/African American	32.8	-2.6	0.0	32.8	-5.9*
Hispanic	29.5	-5.9*	-1.4	30.9	-7.7*
Asian/Pacific Islander	36.6	1.2	-4.8	41.4	2.7*
American Indian/Alaska Native	37.7	2.3	3.8	33.9	-4.8*
Other/multiple	33.0	-2.4	-1.9	34.9	-3.8*
<b>Sex</b>					
Male	31.9	-3.5*	-3.5*	35.4	-3.3*
Female	38.8	3.4*	-3.0*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	32.3	-3.1*	-3.1*	35.4	-3.3*
1+ chronic conditions	44.8	9.4*	-4.4*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	19.7	-15.7*	2.2	17.6	-21.1*
Insured	37.8	2.4*	-3.8*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	19.7	-15.7*	-0.4	20.1	-18.6*
Has personal doctor	41.3	5.8*	-2.8*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	37.2		-3.0*	40.2	
Less than high school	32.8	-4.4*	-1.2	34.0	-6.1*
High school graduate	31.2	-5.9*	-4.4*	35.6	-4.6*
Some college or associate's degree	36.6	-0.6	-2.2*	38.8	-1.4*
Bachelor's degree or higher	44.8	8.2*	-3.2*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	33.0	-2.4*	-1.8	34.8	-3.9*
\$25,000 to \$49,999	32.9	-2.6*	-3.6*	36.5	-2.2*
\$50,000 to \$74,999	35.9	0.5	-2.7*	38.6	-0.1
\$75,000 or more	39.8	4.4*	-3.0*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

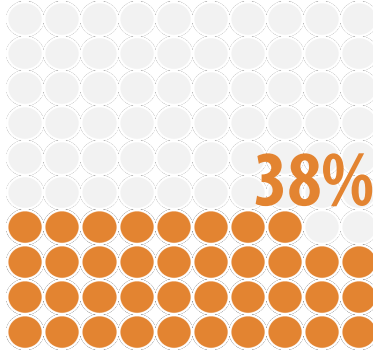
## California

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

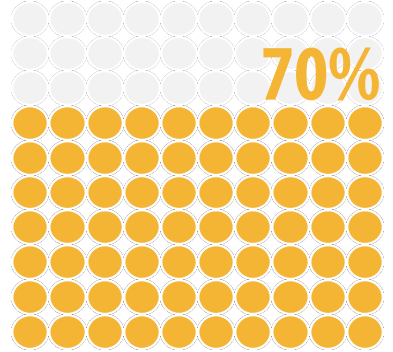
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

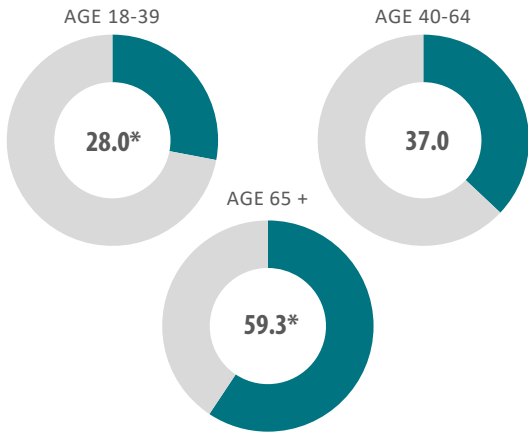
STATE RATE



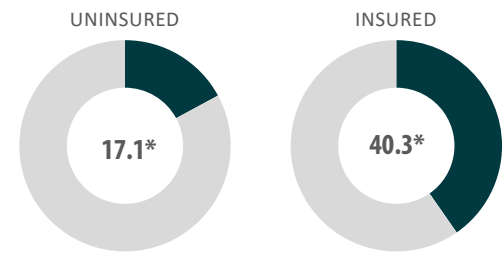
HERD IMMUNITY THRESHOLD



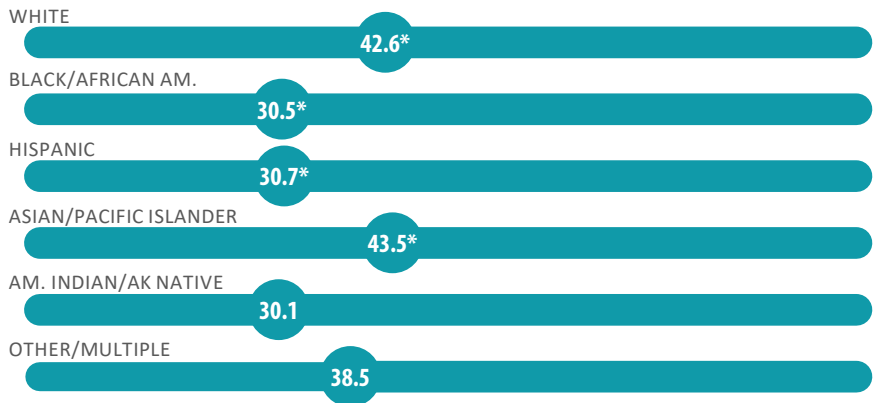
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

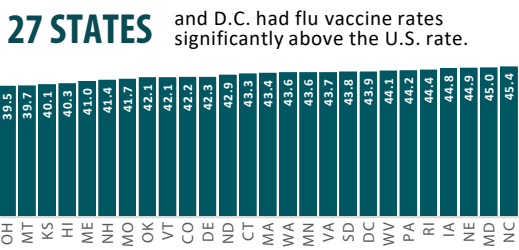
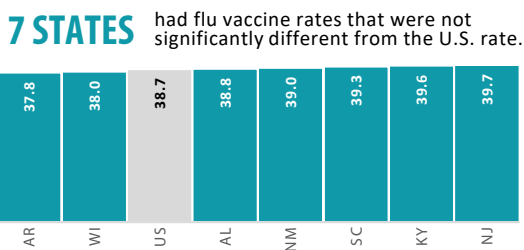
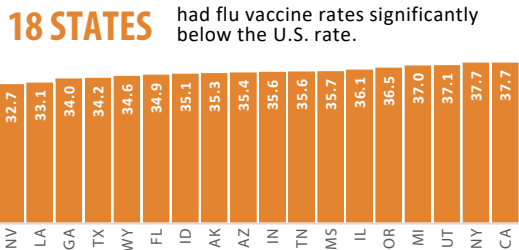


### Flu Vaccination Rates by Household Income

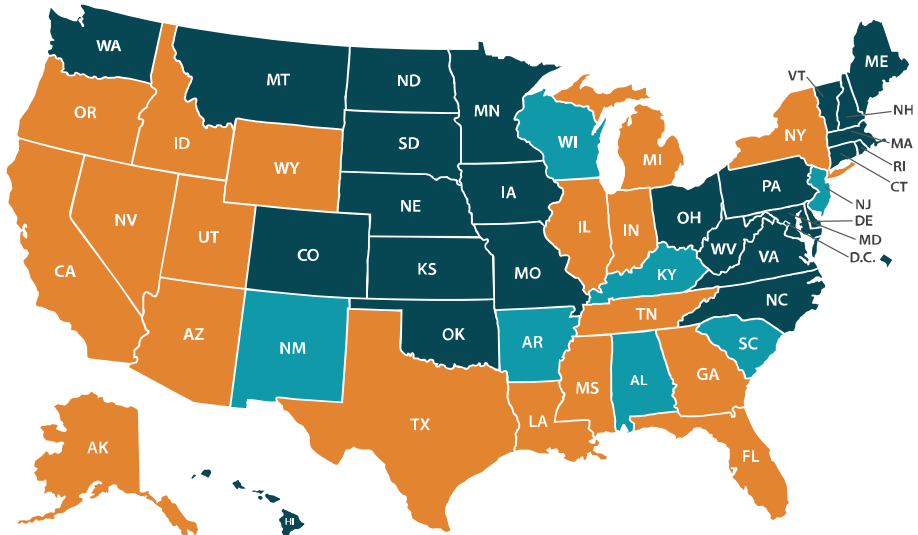


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

California	California			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	37.7		-1.0*	38.7	
<b>Age</b>					
18-39	28.0	-9.7*	-0.5	28.5	-10.2*
40-64	37.0	-0.7	-0.2	37.2	-1.5*
65+	59.3	21.6*	-0.1	59.4	20.7*
<b>Race/Ethnicity</b>					
White	42.6	4.9*	0.9	41.7	3.0*
Black/African American	30.5	-7.3*	-2.3	32.8	-5.9*
Hispanic	30.7	-7.0*	-0.2	30.9	-7.7*
Asian/Pacific Islander	43.5	5.8*	2.1*	41.4	2.7*
American Indian/Alaska Native	30.1	-7.6	-3.8	33.9	-4.8*
Other/multiple	38.5	0.8	3.7*	34.9	-3.8*
<b>Sex</b>					
Male	34.8	-2.9*	-0.6	35.4	-3.3*
Female	40.5	2.8*	-1.3*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	34.7	-3.1*	-0.7	35.4	-3.3*
1+ chronic conditions	49.0	11.3*	-0.1	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	17.1	-20.6*	-0.5	17.6	-21.1*
Insured	40.3	2.6*	-1.3*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	19.6	-18.1*	-0.5	20.1	-18.6*
Has personal doctor	43.6	5.9*	-0.5	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	39.4		-0.8	40.2	
Less than high school	33.2	-6.2*	-0.8	34.0	-6.1*
High school graduate	33.6	-5.7*	-1.9*	35.6	-4.6*
Some college or associate's degree	38.1	-1.3	-0.7	38.8	-1.4*
Bachelor's degree or higher	47.3	9.3*	-0.6	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	33.1	-4.6*	-1.7	34.8	-3.9*
\$25,000 to \$49,999	35.6	-2.1*	-0.9	36.5	-2.2*
\$50,000 to \$74,999	37.7	0.0	-0.9	38.6	-0.1
\$75,000 or more	41.4	3.7*	-1.4*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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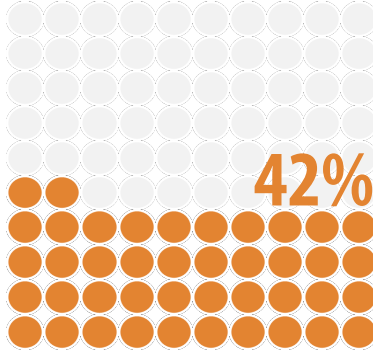
## Colorado

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

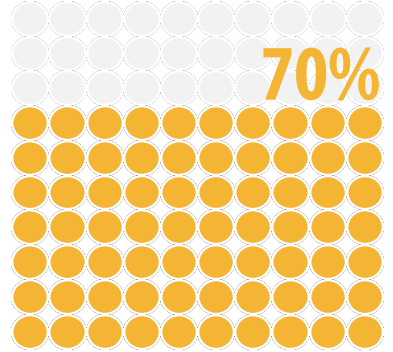
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

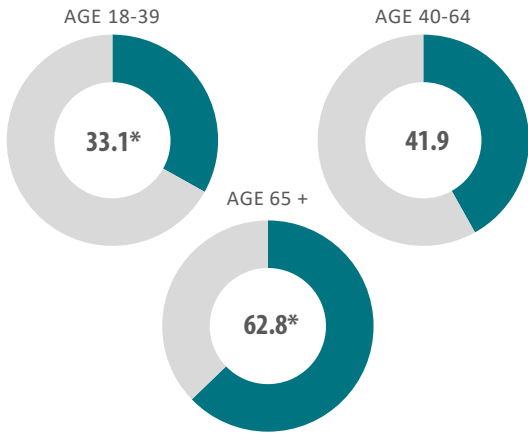
STATE RATE



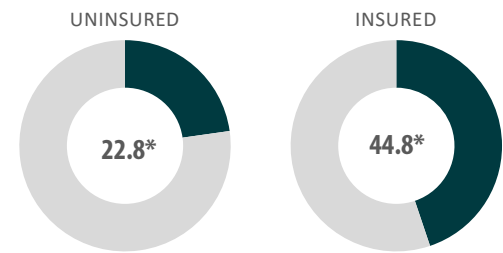
HERD IMMUNITY THRESHOLD



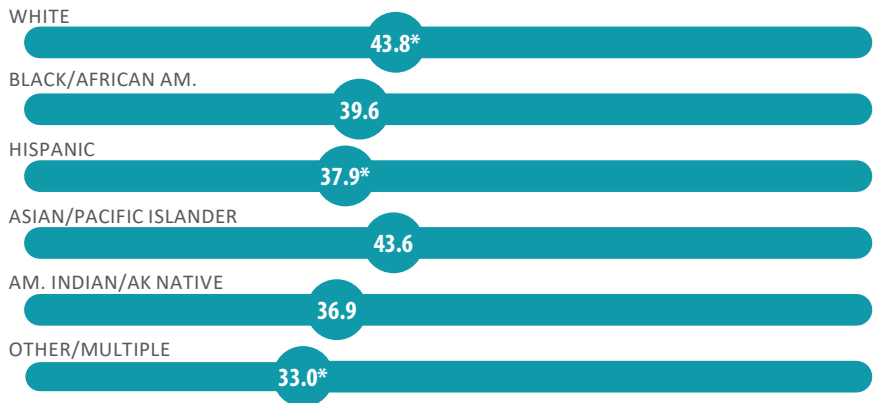
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

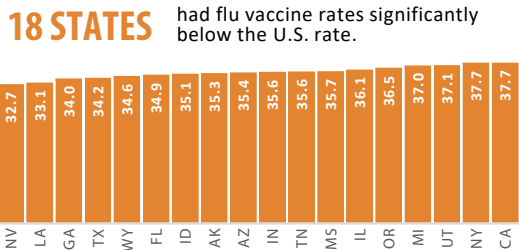


### Flu Vaccination Rates by Household Income

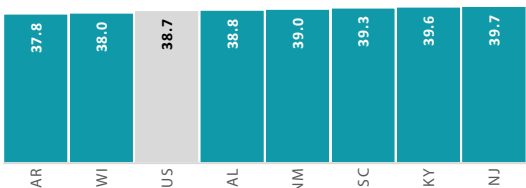


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



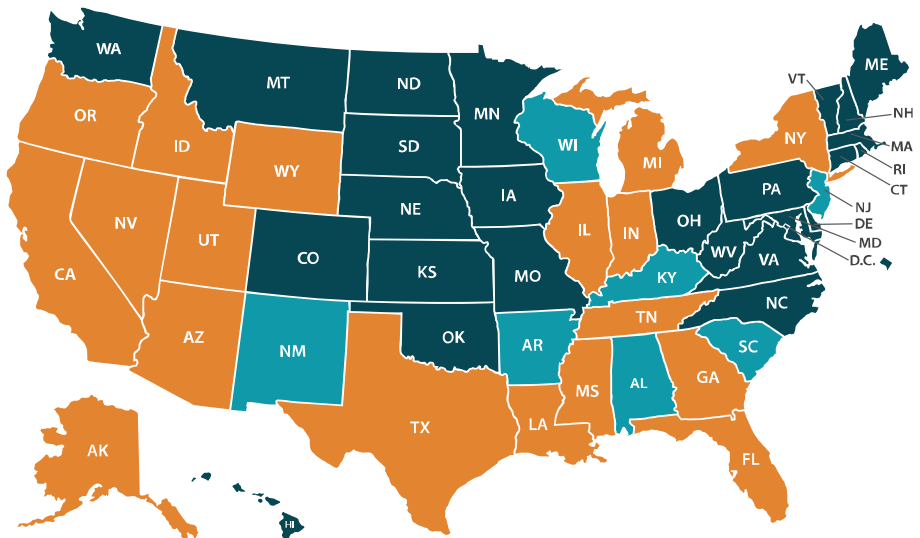
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Colorado	Colorado		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	42.2		3.6*	38.7	
<b>Age</b>					
18-39	33.1	-9.1*	4.6*	28.5	-10.2*
40-64	41.9	-0.4	4.7*	37.2	-1.5*
65+	62.8	20.6*	3.4*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	43.8	1.6*	2.1*	41.7	3.0*
Black/African American	39.6	-2.6	6.8*	32.8	-5.9*
Hispanic	37.9	-4.3*	7.0*	30.9	-7.7*
Asian/Pacific Islander	43.6	1.3	2.2	41.4	2.7*
American Indian/Alaska Native	36.9	-5.3	3.0	33.9	-4.8*
Other/multiple	33.0	-9.3*	-1.9	34.9	-3.8*
<b>Sex</b>					
Male	37.9	-4.3*	2.6*	35.4	-3.3*
Female	46.5	4.3*	4.7*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	39.6	-2.6*	4.2*	35.4	-3.3*
1+ chronic conditions	52.9	10.7*	3.8*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	22.8	-19.5*	5.2*	17.6	-21.1*
Insured	44.8	2.6*	3.2*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	22.8	-19.4*	2.7*	20.1	-18.6*
Has personal doctor	49.2	6.9*	5.1*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	43.8		3.6*	40.2	
Less than high school	40.3	-3.4*	6.3*	34.0	-6.1*
High school graduate	36.8	-7.0*	1.2	35.6	-4.6*
Some college or associate's degree	39.8	-3.9*	1.1	38.8	-1.4*
Bachelor's degree or higher	51.2	11.4*	3.3*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	36.3	-5.9*	1.5	34.8	-3.9*
\$25,000 to \$49,999	37.8	-4.4*	1.3	36.5	-2.2*
\$50,000 to \$74,999	42.5	0.3	3.9*	38.6	-0.1
\$75,000 or more	47.0	4.8*	4.2*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





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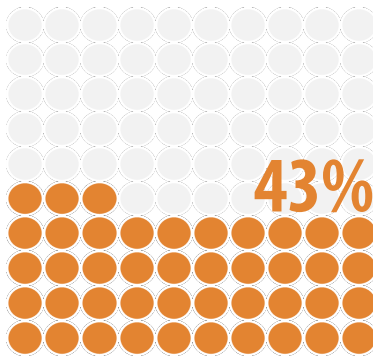
## Connecticut

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

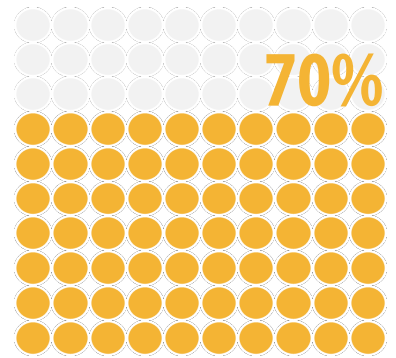
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

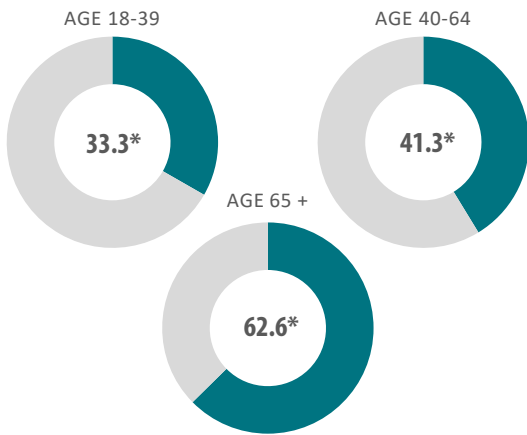
STATE RATE



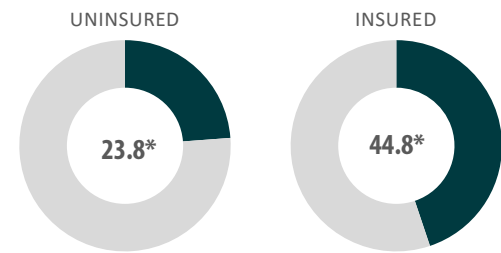
HERD IMMUNITY THRESHOLD



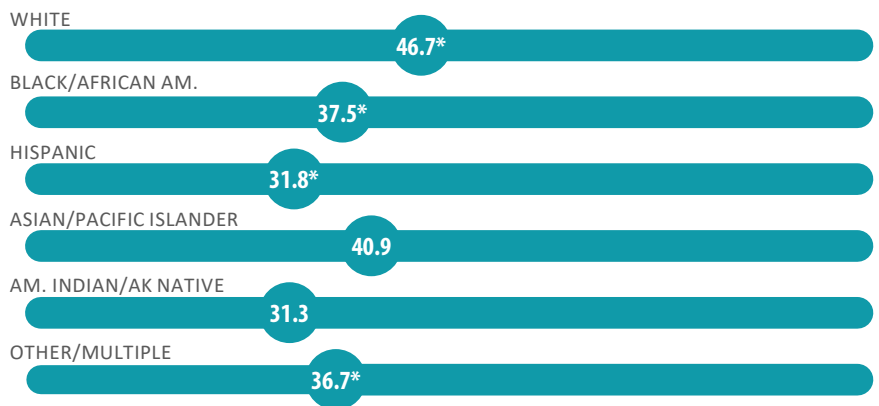
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

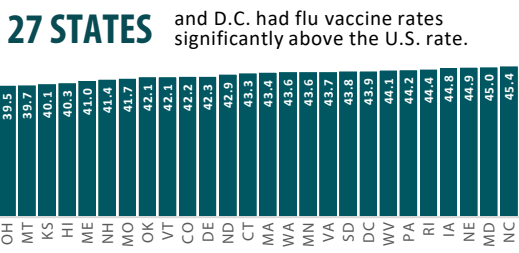
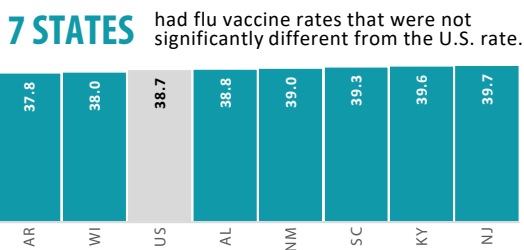
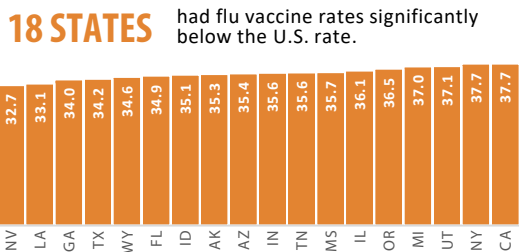


### Flu Vaccination Rates by Household Income

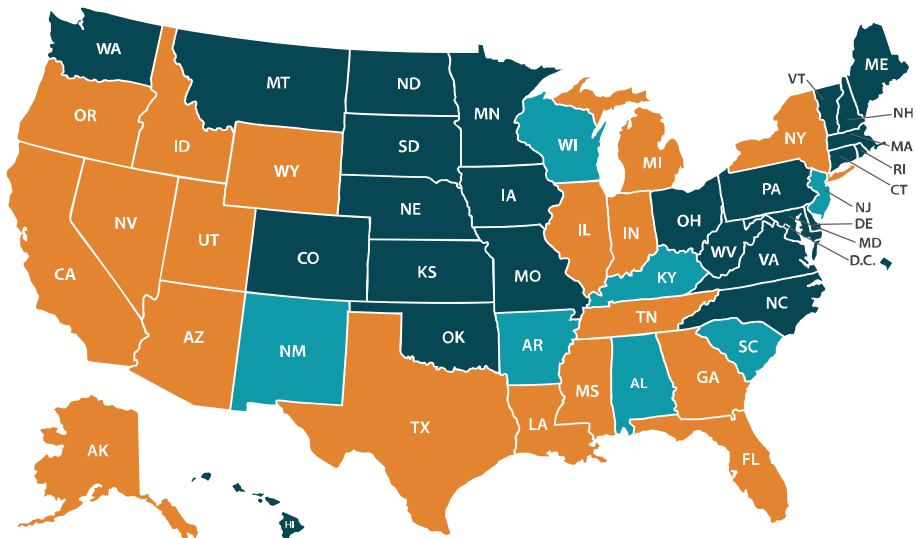


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Connecticut	Connecticut			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	43.3		4.6*	38.7	
<b>Age</b>					
18-39	33.3	-10.0*	4.8*	28.5	-10.2*
40-64	41.3	-2.0*	4.1*	37.2	-1.5*
65+	62.6	19.3*	3.2*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	46.7	3.4*	5.0*	41.7	3.0*
Black/African American	37.5	-5.8*	4.7*	32.8	-5.9*
Hispanic	31.8	-11.5*	0.8	30.9	-7.7*
Asian/Pacific Islander	40.9	-2.4	-0.5	41.4	2.7*
American Indian/Alaska Native	31.3	-12.1	-2.6	33.9	-4.8*
Other/multiple	36.7	-6.6*	1.8	34.9	-3.8*
<b>Sex</b>					
Male	40.0	-3.3*	4.6*	35.4	-3.3*
Female	46.3	3.0*	4.5*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	40.5	-2.8*	5.1*	35.4	-3.3*
1+ chronic conditions	52.6	9.3*	3.5*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	23.8	-19.5*	6.2*	17.6	-21.1*
Insured	44.8	1.5*	3.2*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	23.1	-20.2*	3.0*	20.1	-18.6*
Has personal doctor	46.8	3.5*	2.7*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	44.9		4.7*	40.2	
Less than high school	39.5	-5.4*	5.4*	34.0	-6.1*
High school graduate	39.9	-5.0*	4.3*	35.6	-4.6*
Some college or associate's degree	42.5	-2.3*	3.8*	38.8	-1.4*
Bachelor's degree or higher	51.2	8.7*	3.3*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	38.9	-4.4*	4.1*	34.8	-3.9*
\$25,000 to \$49,999	40.0	-3.3*	3.5*	36.5	-2.2*
\$50,000 to \$74,999	41.3	-2.0	2.8*	38.6	-0.1
\$75,000 or more	47.1	3.8*	4.3*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

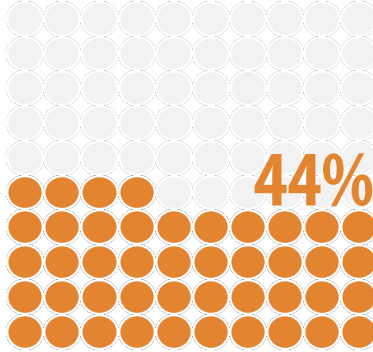
## District of Columbia

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

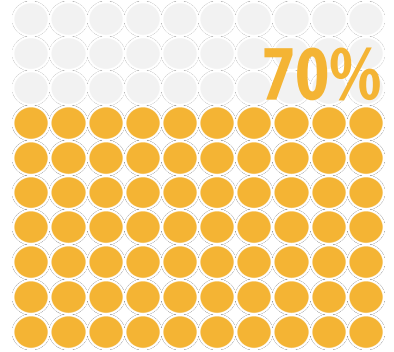
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

## State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

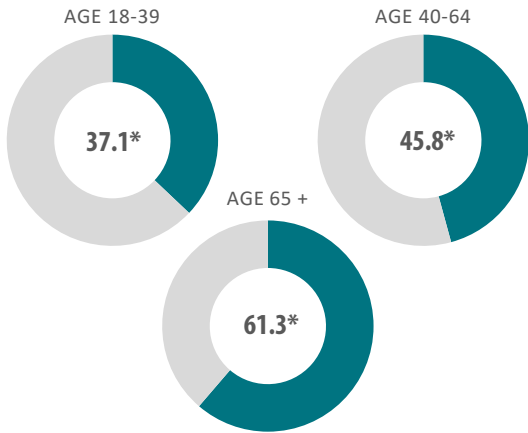
STATE RATE



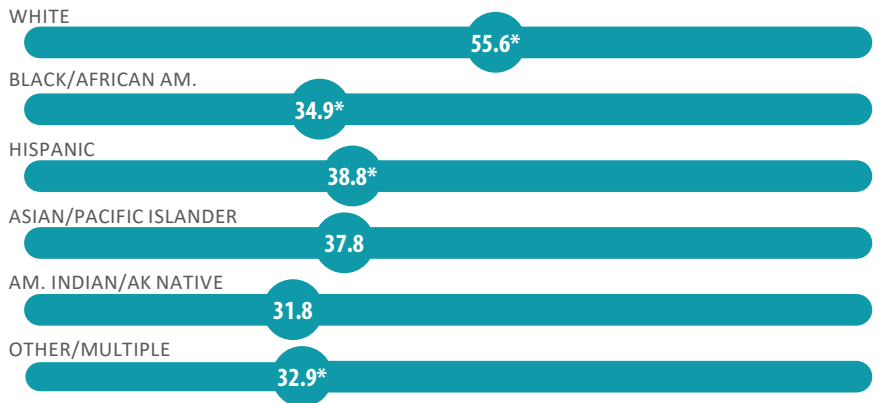
HERD IMMUNITY THRESHOLD



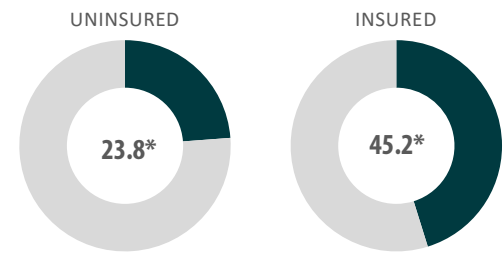
## Flu Vaccination Rates by Age



## Flu Vaccination Rates by Race/Ethnicity



## Flu Vaccination Rates by Insurance Status



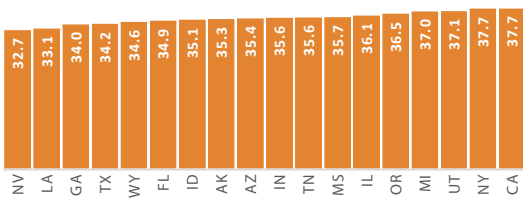
## Flu Vaccination Rates by Household Income



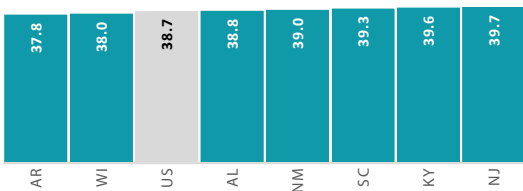
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

## State vs. National Adult Flu Vaccination Rates

**18 STATES** had flu vaccine rates significantly below the U.S. rate.



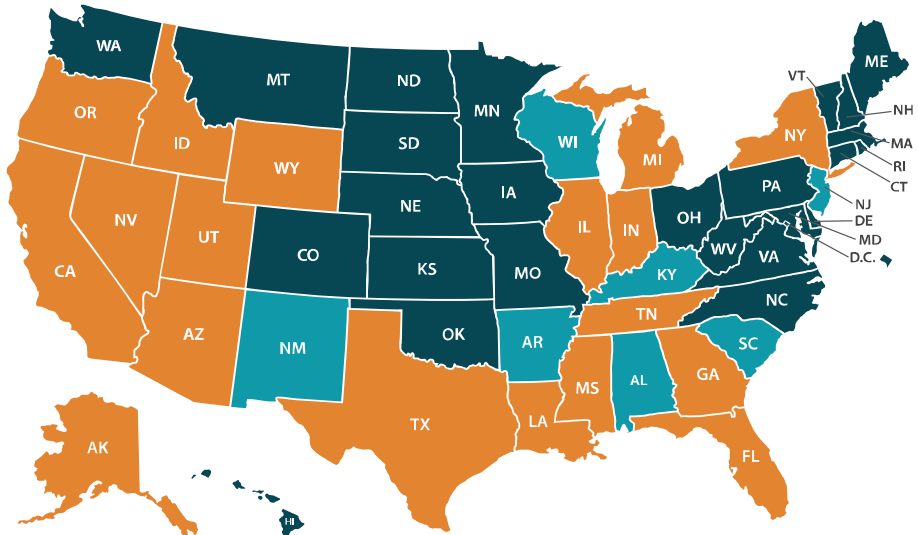
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

District of Columbia	District of Columbia			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	43.9		5.2*	38.7	
<b>Age</b>					
18-39	37.1	-6.8*	8.6*	28.5	-10.2*
40-64	45.8	1.9*	8.6*	37.2	-1.5*
65+	61.3	17.4*	1.9	59.4	20.7*
<b>Race/Ethnicity</b>					
White	55.6	11.7*	13.9*	41.7	3.0*
Black/African American	34.9	-9.0*	2.1*	32.8	-5.9*
Hispanic	38.8	-5.1*	7.8*	30.9	-7.7*
Asian/Pacific Islander	37.8	-6.1	-3.6	41.4	2.7*
American Indian/Alaska Native	31.8	-12.1	-2.1	33.9	-4.8*
Other/multiple	32.9	-11.0*	-2.0	34.9	-3.8*
<b>Sex</b>					
Male	42.5	-1.4*	7.1*	35.4	-3.3*
Female	45.1	1.2*	3.3*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	42.5	-1.3*	7.1*	35.4	-3.3*
1+ chronic conditions	48.9	5.0*	-0.3	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	23.8	-20.1*	6.2*	17.6	-21.1*
Insured	45.2	1.3*	3.6*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	30.5	-13.4*	10.4*	20.1	-18.6*
Has personal doctor	48.1	4.2*	4.0*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	45.6		5.4*	40.2	
Less than high school	39.6	-6.0*	5.5*	34.0	-6.1*
High school graduate	34.9	-10.7*	-0.7	35.6	-4.6*
Some college or associate's degree	33.3	-12.2*	-5.4*	38.8	-1.4*
Bachelor's degree or higher	53.2	19.8*	5.2*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	33.8	-10.1*	-1.0	34.8	-3.9*
\$25,000 to \$49,999	35.1	-8.7*	-1.4	36.5	-2.2*
\$50,000 to \$74,999	40.4	-3.5*	1.8	38.6	-0.1
\$75,000 or more	53.5	9.6*	10.7*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

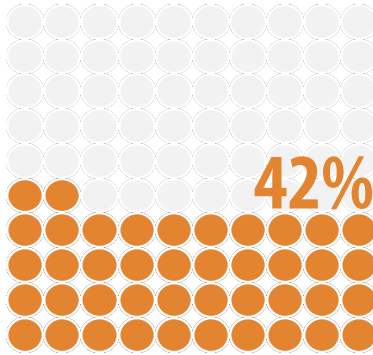
## Delaware

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

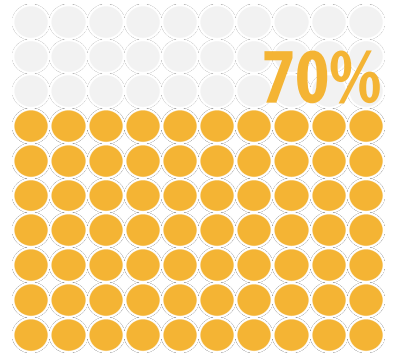
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

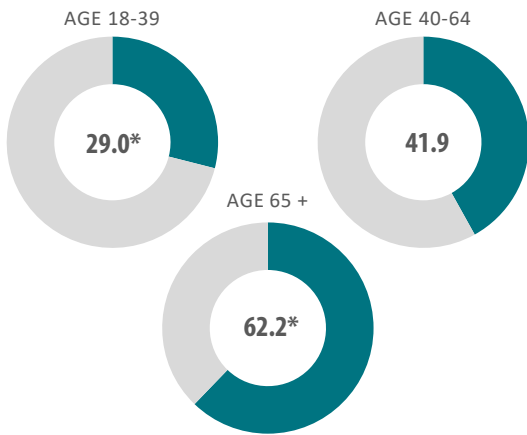
STATE RATE



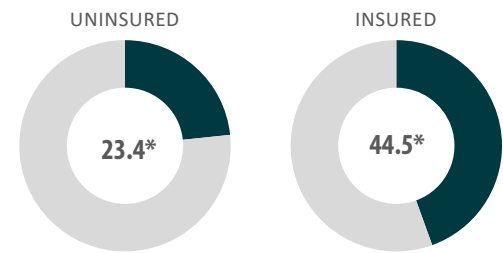
HERD IMMUNITY THRESHOLD



### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

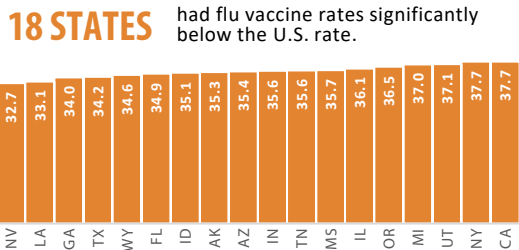


### Flu Vaccination Rates by Household Income

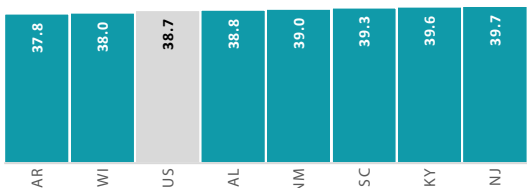


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



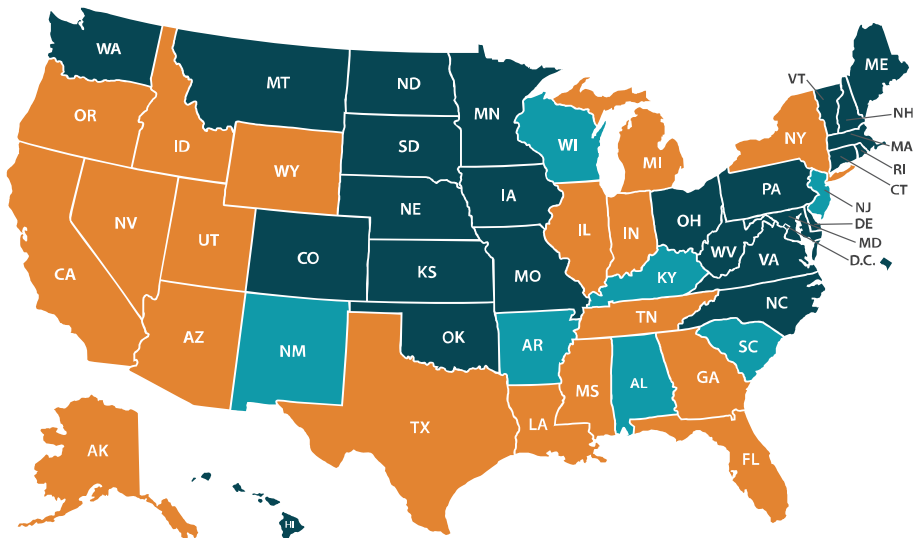
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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Delaware	Delaware		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	42.3		3.6*	38.7	
<b>Age</b>					
18-39	29.0	-13.3*	0.4	28.5	-10.2*
40-64	41.9	-0.3	4.7*	37.2	-1.5*
65+	62.2	19.9*	2.8*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	45.7	3.4*	4.0*	41.7	3.0*
Black/African American	35.1	-7.2*	2.3	32.8	-5.9*
Hispanic	36.9	-5.3*	6.0*	30.9	-7.7*
Asian/Pacific Islander	40.8	-1.5	-0.6	41.4	2.7*
American Indian/Alaska Native	39.0	-3.2	5.2	33.9	-4.8*
Other/multiple	32.6	-9.6*	-2.2	34.9	-3.8*
<b>Sex</b>					
Male	37.9	-4.4*	2.5*	35.4	-3.3*
Female	46.4	4.1*	4.6*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	38.5	-3.8*	3.1*	35.4	-3.3*
1+ chronic conditions	53.7	11.4*	4.6*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	23.4	-18.9*	5.8*	17.6	-21.1*
Insured	44.5	2.2*	2.9*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	22.9	-19.4*	2.8*	20.1	-18.6*
Has personal doctor	46.7	4.4*	2.6*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	44.1		3.9*	40.2	
Less than high school	37.9	-6.2*	3.8	34.0	-6.1*
High school graduate	39.1	-5.0*	3.5*	35.6	-4.6*
Some college or associate's degree	45.2	1.2	6.5*	38.8	-1.4*
Bachelor's degree or higher	49.7	4.5*	1.8	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	37.3	-5.0*	2.5*	34.8	-3.9*
\$25,000 to \$49,999	43.0	0.7	6.5*	36.5	-2.2*
\$50,000 to \$74,999	43.3	1.0	4.7*	38.6	-0.1
\$75,000 or more	45.0	2.8*	2.2	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

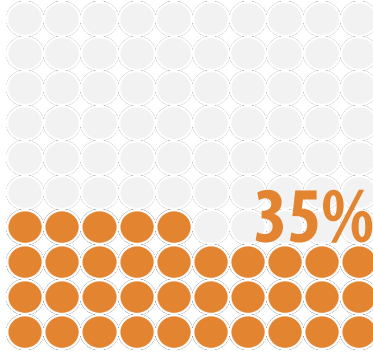
## Florida

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

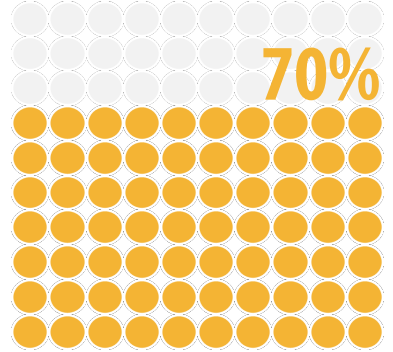
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

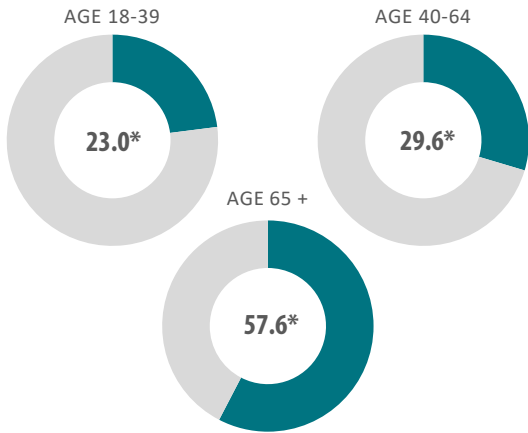
STATE RATE



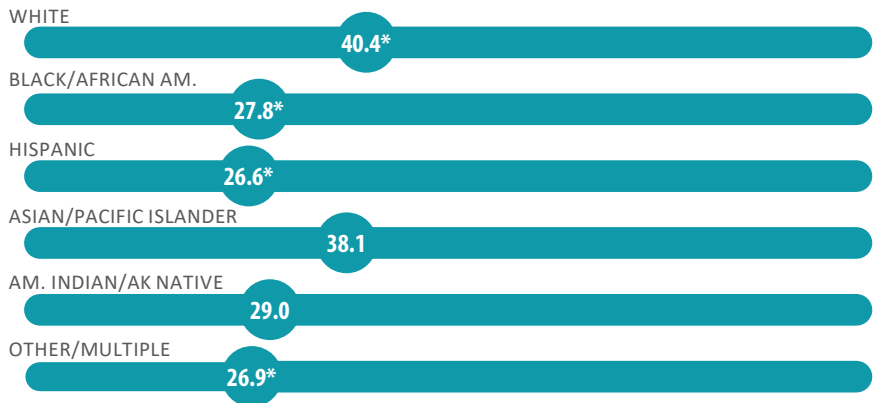
HERD IMMUNITY THRESHOLD



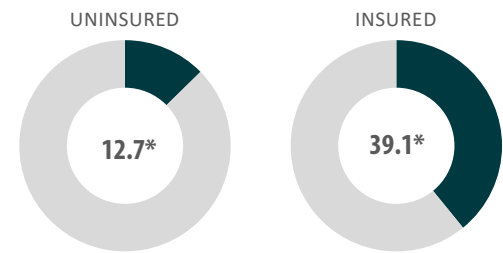
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

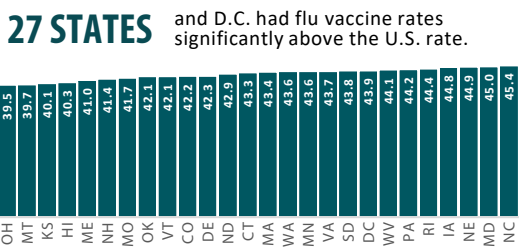
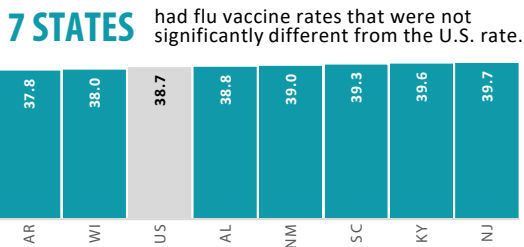
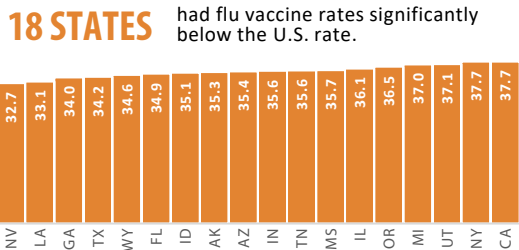


### Flu Vaccination Rates by Household Income

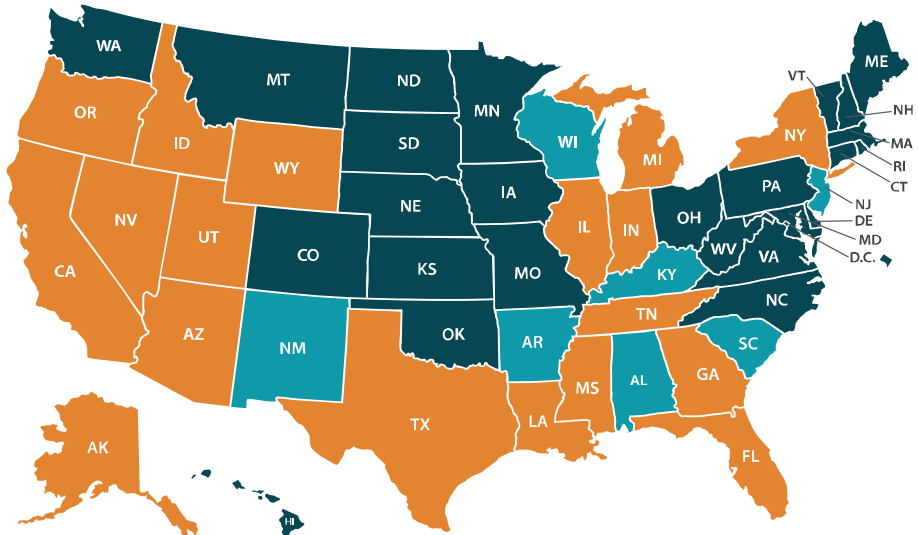


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Florida	Florida		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	34.9		-3.8*	38.7	
<b>Age</b>					
18-39	23.0	-11.9*	-5.5*	28.5	-10.2*
40-64	29.6	-5.3*	-7.6*	37.2	-1.5*
65+	57.6	22.7*	-1.8*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	40.4	5.5*	-1.3*	41.7	3.0*
Black/African American	27.8	-7.1*	-5.0*	32.8	-5.9*
Hispanic	26.6	-8.3*	-4.4*	30.9	-7.7*
Asian/Pacific Islander	38.1	3.2	-3.3	41.4	2.7*
American Indian/Alaska Native	29.0	-5.9	-4.8	33.9	-4.8*
Other/multiple	26.9	-8.0*	-7.9*	34.9	-3.8*
<b>Sex</b>					
Male	33.3	-1.6*	-2.1*	35.4	-3.3*
Female	36.6	1.7*	-5.2*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	31.3	-3.6*	-4.1*	35.4	-3.3*
1+ chronic conditions	46.4	11.5*	-2.8*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	12.7	-22.2*	-4.9*	17.6	-21.1*
Insured	39.1	4.2*	-2.5*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	16.4	-18.5*	-3.7*	20.1	-18.6*
Has personal doctor	41.8	6.9*	-2.3*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	36.4		-3.8*	40.2	
Less than high school	32.4	-4.0*	-1.7	34.0	-6.1*
High school graduate	33.6	-2.7*	-2.0*	35.6	-4.6*
Some college or associate's degree	35.6	-0.7	-3.1*	38.8	-1.4*
Bachelor's degree or higher	41.7	6.0*	-6.3*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	32.8	-2.1*	-1.9	34.8	-3.9*
\$25,000 to \$49,999	33.9	-1.0	-2.6*	36.5	-2.2*
\$50,000 to \$74,999	33.4	-1.5	-5.2*	38.6	-0.1
\$75,000 or more	39.4	4.5*	-3.4*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





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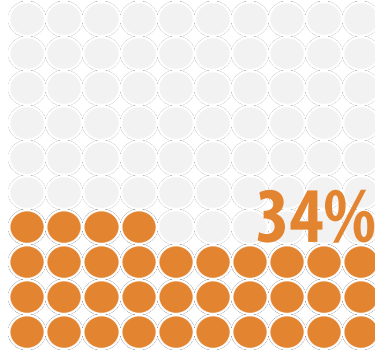
## Georgia

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

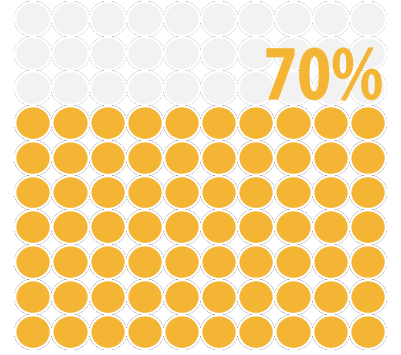
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

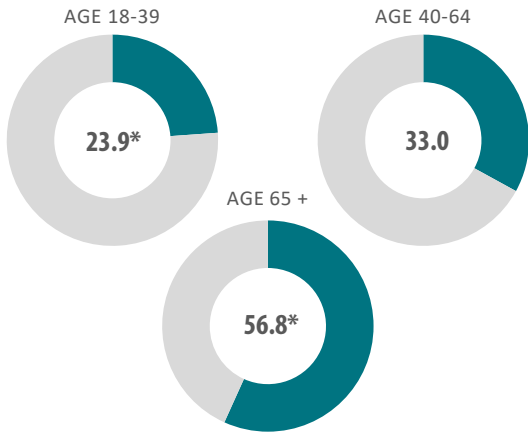
STATE RATE



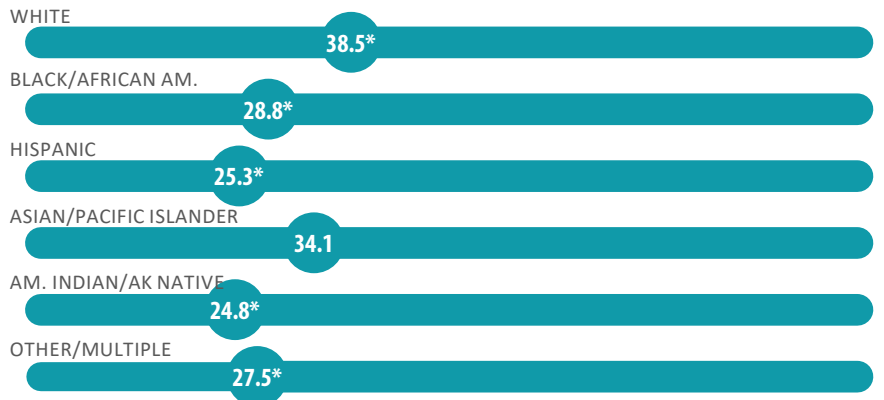
HERD IMMUNITY THRESHOLD



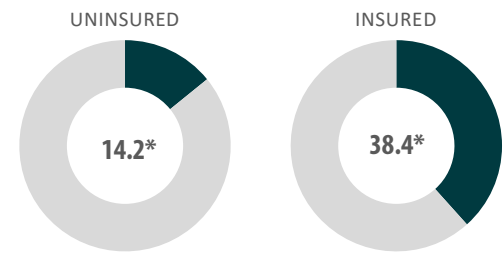
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

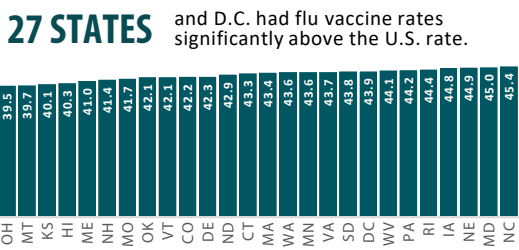
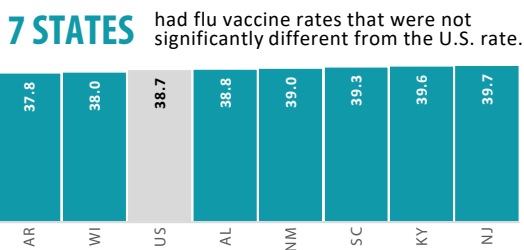
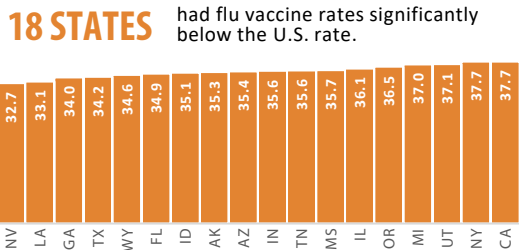


### Flu Vaccination Rates by Household Income

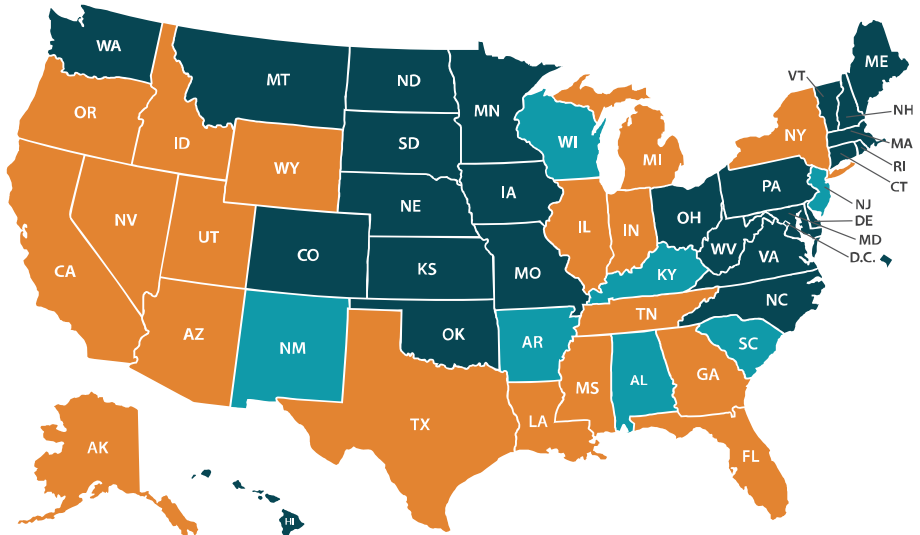


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Georgia	Georgia			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	34.0		-4.7*	38.7	
<b>Age</b>					
18-39	23.9	-10.2*	-4.7*	28.5	-10.2*
40-64	33.0	-1.0	-4.2*	37.2	-1.5*
65+	56.8	22.7*	-2.6*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	38.5	4.5*	-3.2*	41.7	3.0*
Black/African American	28.8	-5.3*	-4.0*	32.8	-5.9*
Hispanic	25.3	-8.7*	-5.6*	30.9	-7.7*
Asian/Pacific Islander	34.1	0.1	-7.3*	41.4	2.7*
American Indian/Alaska Native	24.8	-9.2*	-9.1*	33.9	-4.8*
Other/multiple	27.5	-6.6*	-7.4*	34.9	-3.8*
<b>Sex</b>					
Male	32.2	-1.9*	-3.2*	35.4	-3.3*
Female	35.9	1.8*	-6.0*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	30.7	-3.3*	-4.7*	35.4	-3.3*
1+ chronic conditions	44.8	10.8*	-4.3*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	14.2	-19.9*	-3.4*	17.6	-21.1*
Insured	38.4	4.3*	-3.3*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	17.3	-16.7*	-2.8*	20.1	-18.6*
Has personal doctor	40.3	6.3*	-3.8*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	35.7		-4.4*	40.2	
Less than high school	29.7	-6.0*	-4.3*	34.0	-6.1*
High school graduate	30.4	-5.3*	-5.1*	35.6	-4.6*
Some college or associate's degree	34.8	-0.9	-4.0*	38.8	-1.4*
Bachelor's degree or higher	44.2	9.3*	-3.8*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	29.2	-4.9*	-5.6*	34.8	-3.9*
\$25,000 to \$49,999	31.7	-2.3*	-4.8*	36.5	-2.2*
\$50,000 to \$74,999	35.9	1.9	-2.7*	38.6	-0.1
\$75,000 or more	39.8	5.7*	-3.1*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

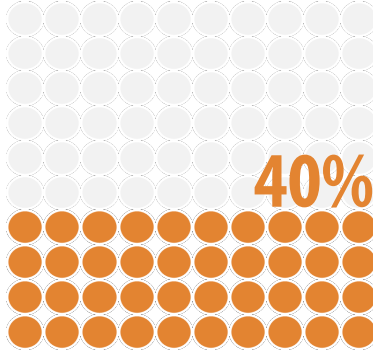
## Hawaii

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

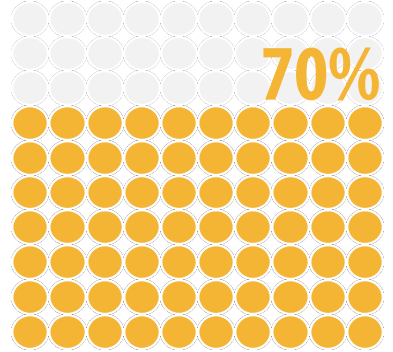
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

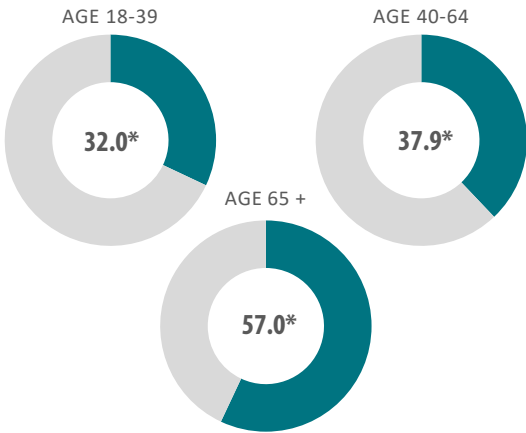
STATE RATE



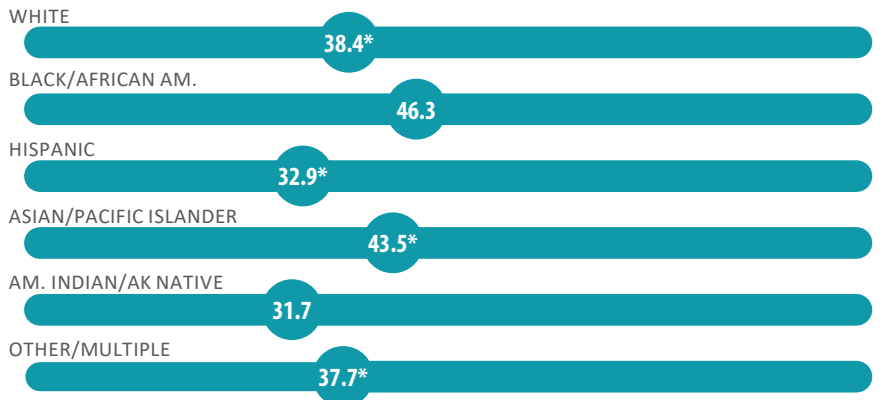
HERD IMMUNITY THRESHOLD



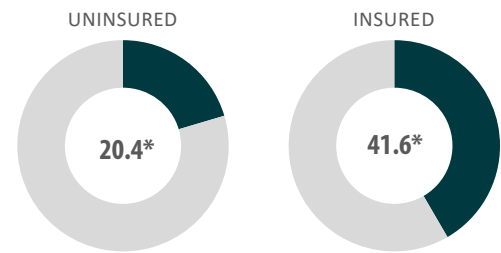
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status



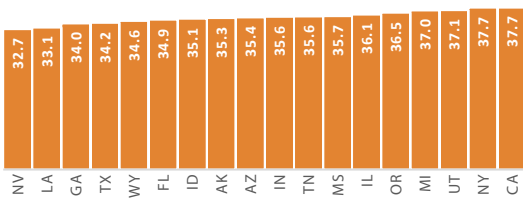
### Flu Vaccination Rates by Household Income



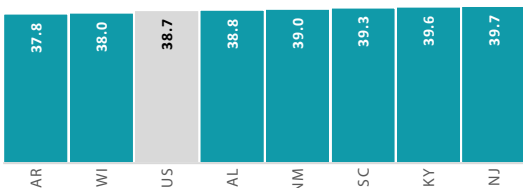
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates

**18 STATES** had flu vaccine rates significantly below the U.S. rate.



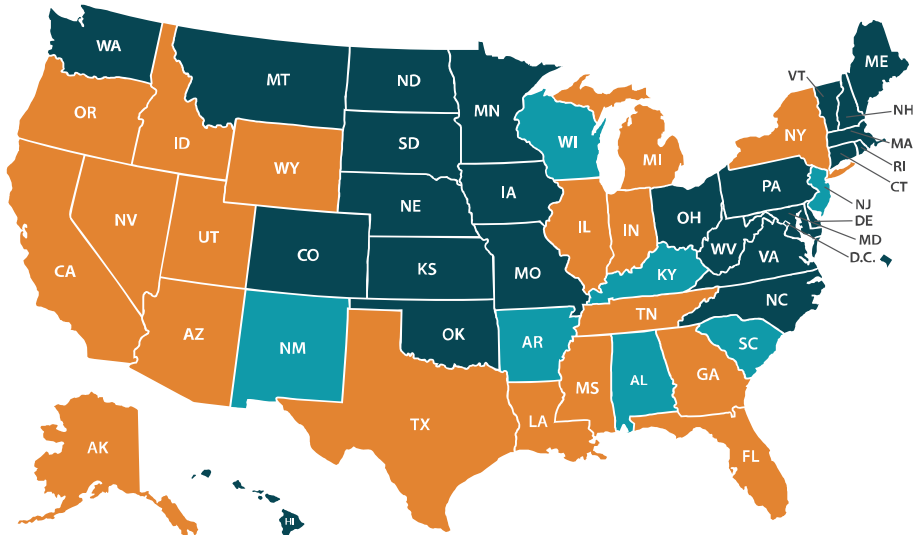
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Hawaii	Hawaii		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	40.3		1.6*	38.7	
<b>Age</b>					
18-39	32.0	-8.3*	3.5*	28.5	-10.2*
40-64	37.9	-2.4*	0.7	37.2	-1.5*
65+	57.0	16.7*	-2.4*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	38.4	-1.9*	-3.4*	41.7	3.0*
Black/African American	46.3	6.0	13.5*	32.8	-5.9*
Hispanic	32.9	-7.4*	2.0	30.9	-7.7*
Asian/Pacific Islander	43.5	3.2*	2.1*	41.4	2.7*
American Indian/Alaska Native	31.7	-8.6	-2.2	33.9	-4.8*
Other/multiple	37.7	-2.6*	2.8*	34.9	-3.8*
<b>Sex</b>					
Male	37.0	-3.3*	1.7*	35.4	-3.3*
Female	43.4	3.1*	1.6*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	36.7	-3.6*	1.3*	35.4	-3.3*
1+ chronic conditions	51.8	11.5*	2.6*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	20.4	-19.9*	2.8	17.6	-21.1*
Insured	41.6	1.3*	0.0	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	21.3	-19.0*	1.2	20.1	-18.6*
Has personal doctor	43.7	3.4*	-0.4	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	41.3		1.1*	40.2	
Less than high school	41.3	0.1	7.3*	34.0	-6.1*
High school graduate	36.7	-4.5*	1.2	35.6	-4.6*
Some college or associate's degree	39.6	-1.7*	0.8	38.8	-1.4*
Bachelor's degree or higher	46.5	6.9*	-1.4*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	37.3	-3.0*	2.6*	34.8	-3.9*
\$25,000 to \$49,999	38.5	-1.8	2.0	36.5	-2.2*
\$50,000 to \$74,999	38.9	-1.4	0.3	38.6	-0.1
\$75,000 or more	43.5	3.2*	0.7	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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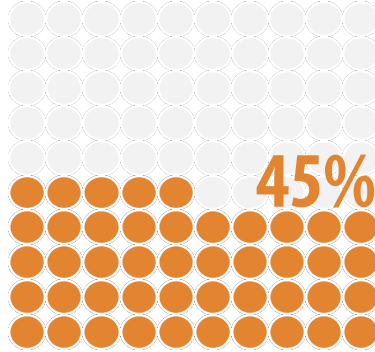
## Iowa

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

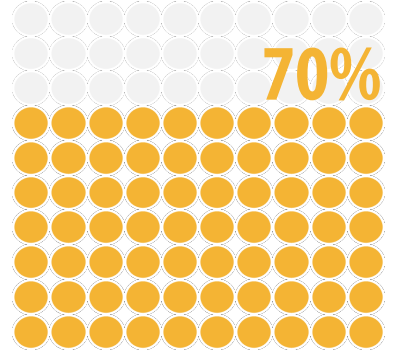
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

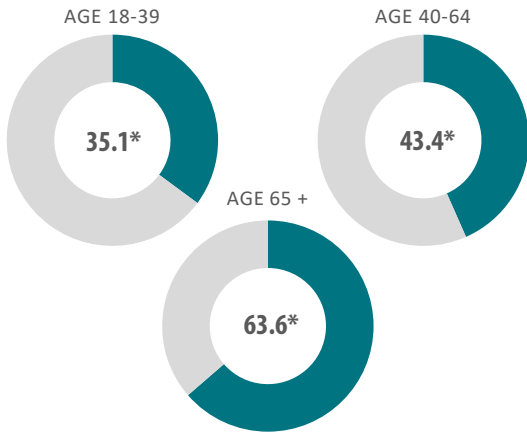
STATE RATE



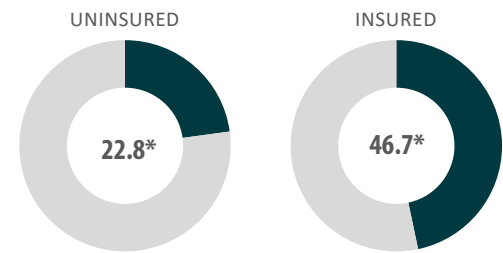
HERD IMMUNITY THRESHOLD



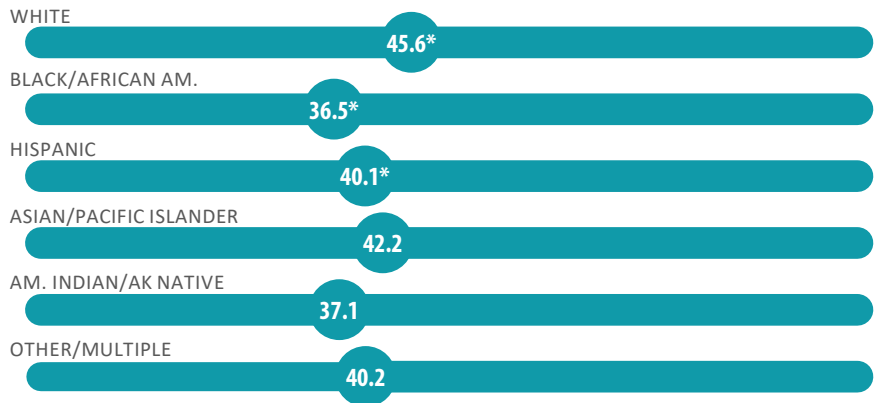
### Flu Vaccination Rates by Age



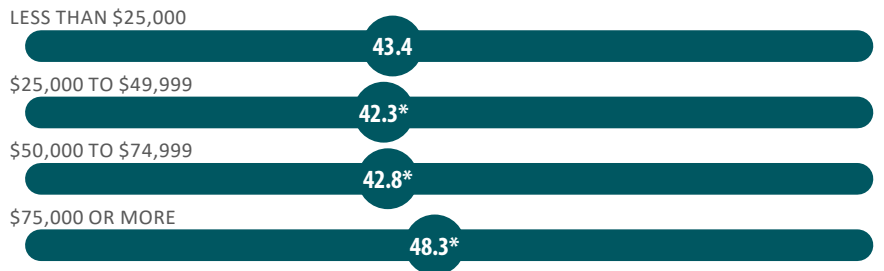
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

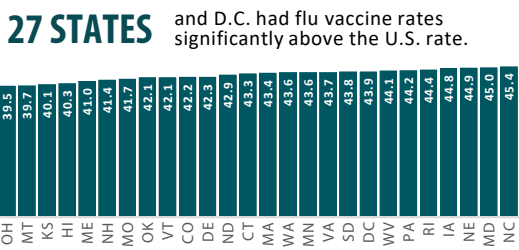
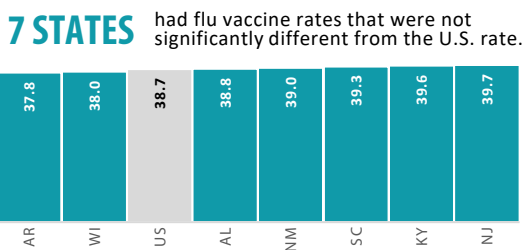
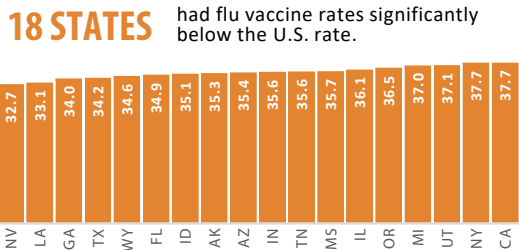


### Flu Vaccination Rates by Household Income

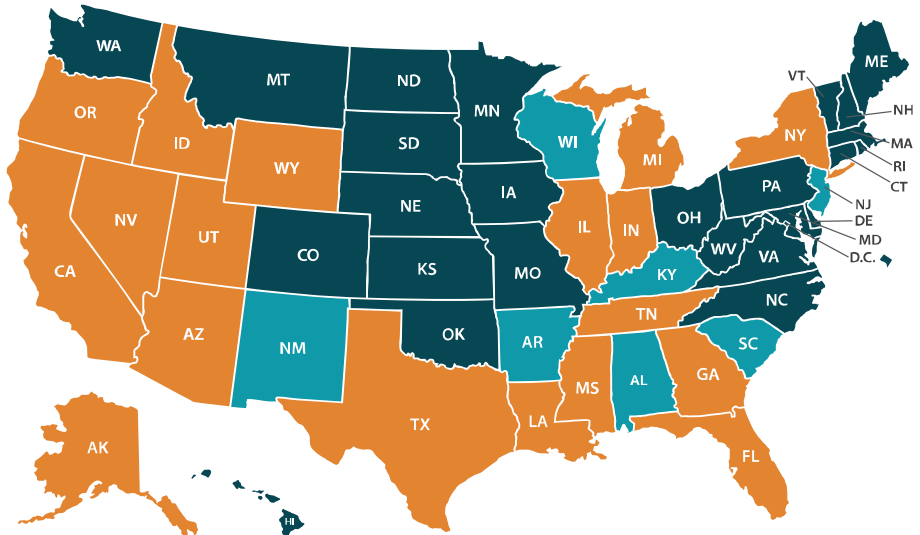


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Iowa	Iowa			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	44.8		6.2*	38.7	
<b>Age</b>					
18-39	35.1	-9.7*	6.6*	28.5	-10.2*
40-64	43.4	-1.4*	6.2*	37.2	-1.5*
65+	63.6	18.8*	4.3*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	45.6	0.8*	3.9*	41.7	3.0*
Black/African American	36.5	-8.4*	3.7	32.8	-5.9*
Hispanic	40.1	-4.7*	9.2*	30.9	-7.7*
Asian/Pacific Islander	42.2	-2.6	0.8	41.4	2.7*
American Indian/Alaska Native	37.1	-7.7	3.2	33.9	-4.8*
Other/multiple	40.2	-4.6	5.4	34.9	-3.8*
<b>Sex</b>					
Male	39.1	-5.8*	3.7*	35.4	-3.3*
Female	50.4	5.5*	8.5*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	41.7	-3.1*	6.3*	35.4	-3.3*
1+ chronic conditions	55.6	10.8*	6.5*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	22.8	-22.0*	5.3*	17.6	-21.1*
Insured	46.7	1.9*	5.1*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	22.3	-22.5*	2.2*	20.1	-18.6*
Has personal doctor	49.5	4.7*	5.4*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	46.7		6.6*	40.2	
Less than high school	40.2	-6.5*	6.2*	34.0	-6.1*
High school graduate	42.7	-4.0*	7.2*	35.6	-4.6*
Some college or associate's degree	45.0	-1.7*	6.2*	38.8	-1.4*
Bachelor's degree or higher	54.8	9.8*	6.9*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	43.4	-1.5	8.6*	34.8	-3.9*
\$25,000 to \$49,999	42.3	-2.5*	5.8*	36.5	-2.2*
\$50,000 to \$74,999	42.8	-2.0*	4.2*	38.6	-0.1
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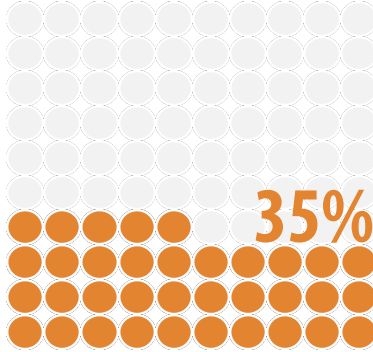
## Idaho

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

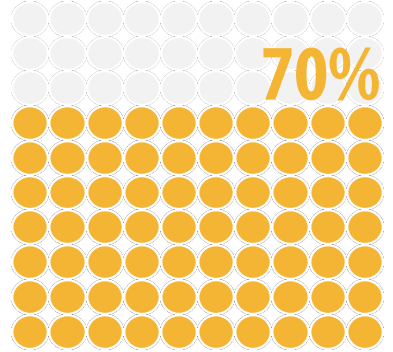
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

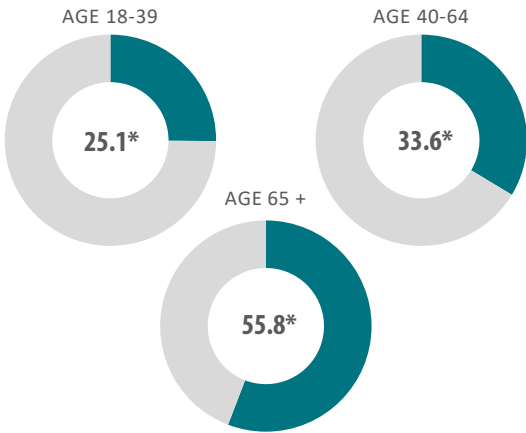
STATE RATE



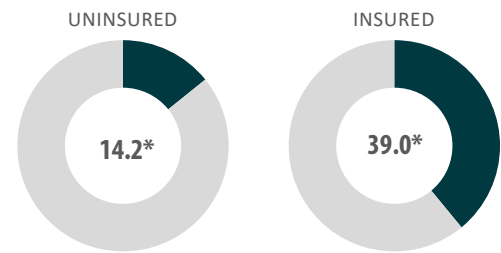
HERD IMMUNITY THRESHOLD



### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

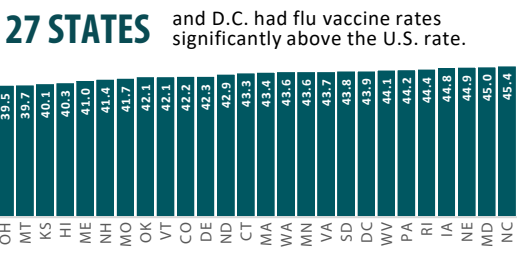
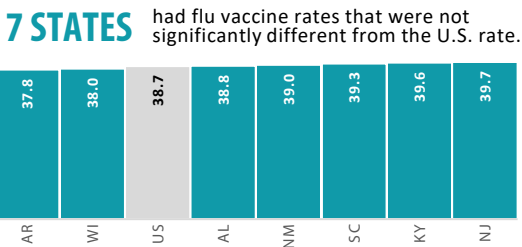
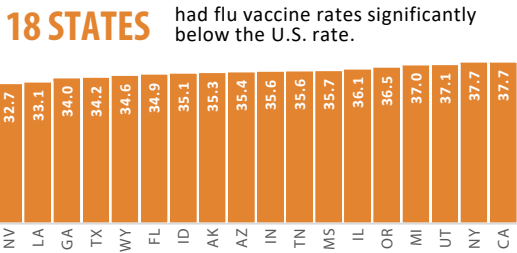


### Flu Vaccination Rates by Household Income

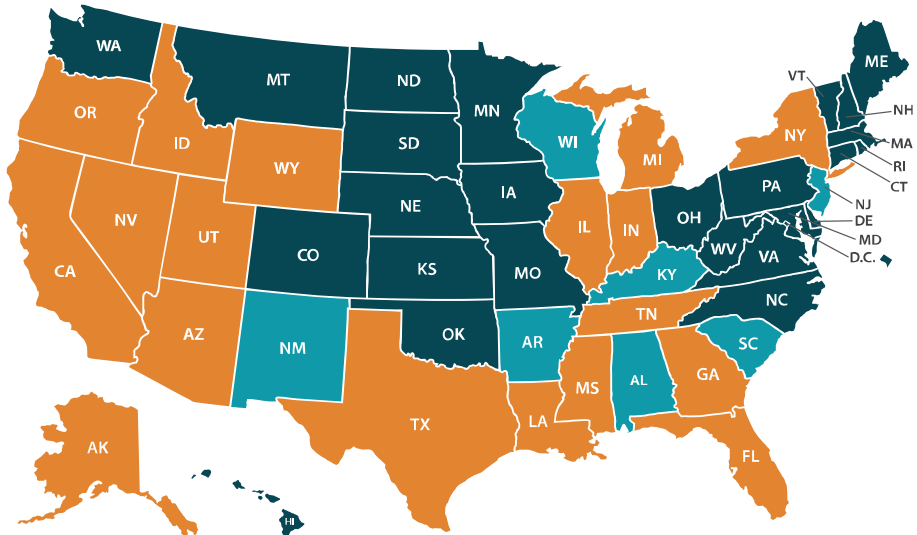


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



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SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

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<b>Age</b>					
18-39	25.1	-10.0*	-3.4*	28.5	-10.2*
40-64	33.6	-1.5*	-3.5*	37.2	-1.5*
65+	55.8	20.7*	-3.6*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	36.3	1.1*	-5.4*	41.7	3.0*
Black/African American	#N/A	#N/A	#N/A	32.8	-5.9*
Hispanic	29.7	-5.4*	-1.2	30.9	-7.7*
Asian/Pacific Islander	38.0	2.9	-3.4	41.4	2.7*
American Indian/Alaska Native	31.0	-4.2	-2.9	33.9	-4.8*
Other/multiple	29.4	-5.7	-5.5	34.9	-3.8*
<b>Sex</b>					
Male	31.8	-3.3*	-3.5*	35.4	-3.3*
Female	38.4	3.3*	-3.4*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	32.3	-2.8*	-3.1*	35.4	-3.3*
1+ chronic conditions	44.9	9.8*	-4.2*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	14.2	-20.9*	-3.4*	17.6	-21.1*
Insured	39.0	3.9*	-2.6*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	16.7	-18.4*	-3.4*	20.1	-18.6*
Has personal doctor	42.1	7.0*	-2.0*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	36.9		-3.3*	40.2	
Less than high school	30.2	-6.7*	-3.8	34.0	-6.1*
High school graduate	32.1	-4.8*	-3.5*	35.6	-4.6*
Some college or associate's degree	36.4	-0.5	-2.4*	38.8	-1.4*
Bachelor's degree or higher	44.8	8.4*	-3.1*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	30.1	-5.0*	-4.7*	34.8	-3.9*
\$25,000 to \$49,999	35.3	0.2	-1.2	36.5	-2.2*
\$50,000 to \$74,999	33.0	-2.1*	-5.6*	38.6	-0.1
\$75,000 or more	41.1	6.0*	-1.7	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

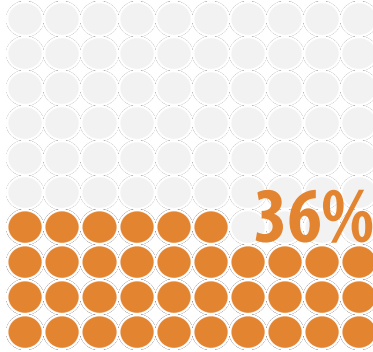
## Illinois

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

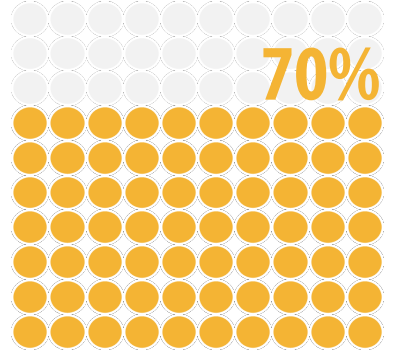
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

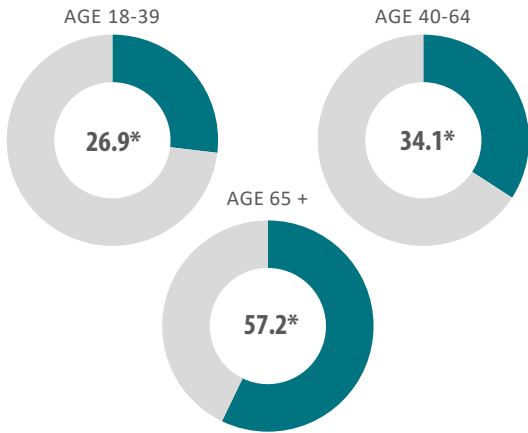
STATE RATE



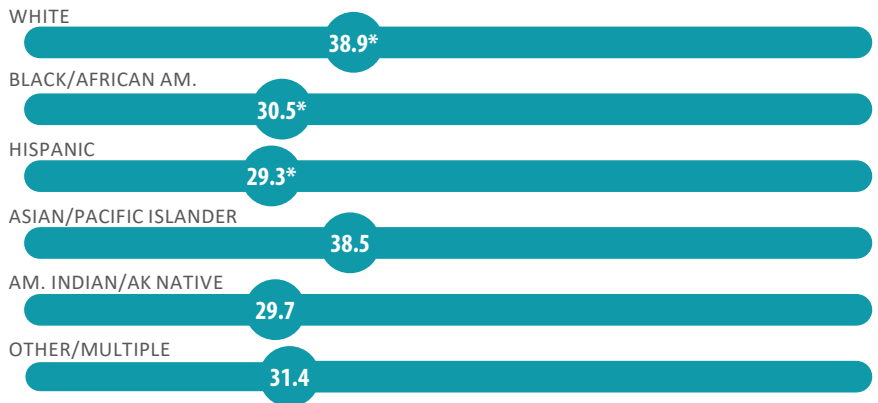
HERD IMMUNITY THRESHOLD



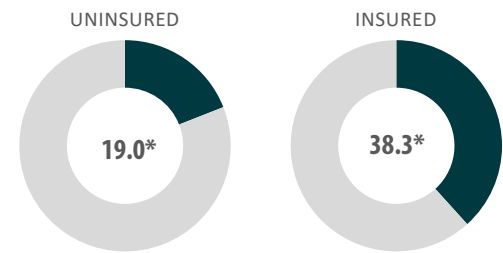
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

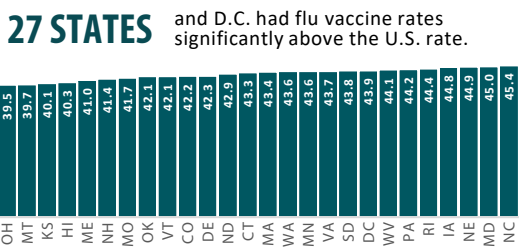
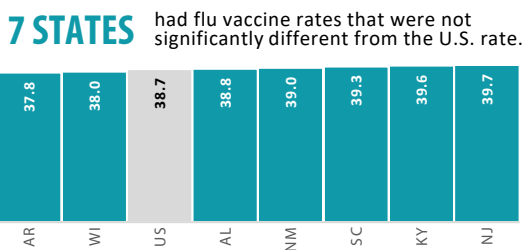
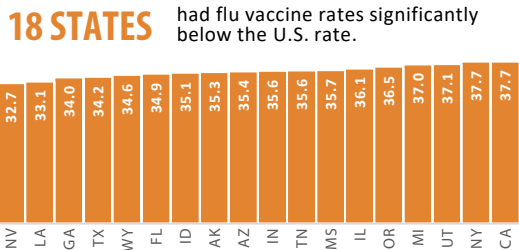


### Flu Vaccination Rates by Household Income

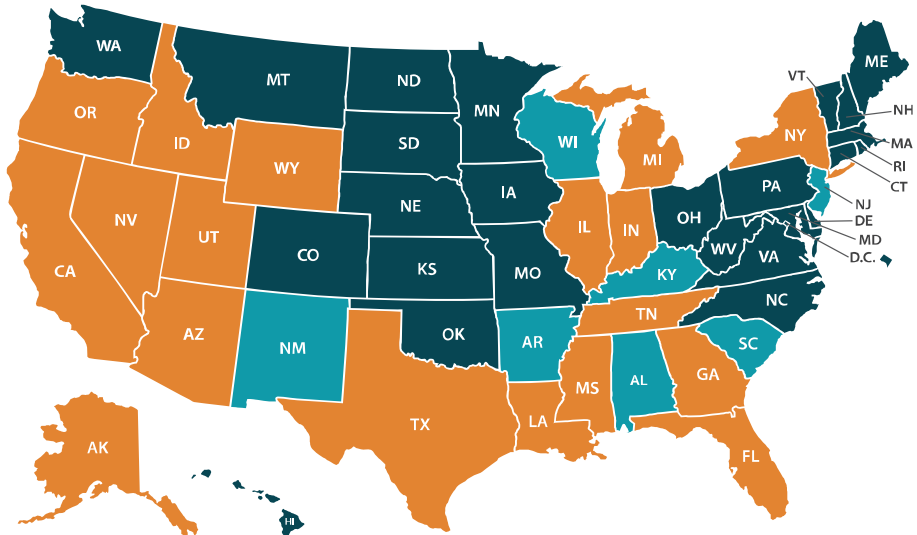


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Illinois	Illinois			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	36.1		-2.6*	38.7	
<b>Age</b>					
18-39	26.9	-9.2*	-1.6*	28.5	-10.2*
40-64	34.1	-1.9*	-3.0*	37.2	-1.5*
65+	57.2	21.1*	-2.2*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	38.9	2.8*	-2.8*	41.7	3.0*
Black/African American	30.5	-5.6*	-2.3	32.8	-5.9*
Hispanic	29.3	-6.8*	-1.7	30.9	-7.7*
Asian/Pacific Islander	38.5	2.4	-2.9	41.4	2.7*
American Indian/Alaska Native	29.7	-6.4	-4.2	33.9	-4.8*
Other/multiple	31.4	-4.7	-3.5	34.9	-3.8*
<b>Sex</b>					
Male	32.5	-3.5*	-2.8*	35.4	-3.3*
Female	39.5	3.4*	-2.3*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	33.0	-3.1*	-2.4*	35.4	-3.3*
1+ chronic conditions	46.6	10.6*	-2.5*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	19.0	-17.1*	1.5	17.6	-21.1*
Insured	38.3	2.2*	-3.3*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	18.3	-17.8*	-1.9*	20.1	-18.6*
Has personal doctor	40.2	4.1*	-3.9*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	37.3		-2.8*	40.2	
Less than high school	31.5	-5.8*	-2.5	34.0	-6.1*
High school graduate	31.9	-5.4*	-3.6*	35.6	-4.6*
Some college or associate's degree	35.2	-2.1*	-3.5*	38.8	-1.4*
Bachelor's degree or higher	45.2	10.0*	-2.7*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	31.9	-4.2*	-2.8*	34.8	-3.9*
\$25,000 to \$49,999	34.2	-1.9	-2.3*	36.5	-2.2*
\$50,000 to \$74,999	35.7	-0.3	-2.9*	38.6	-0.1
\$75,000 or more	39.9	3.8*	-2.9*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

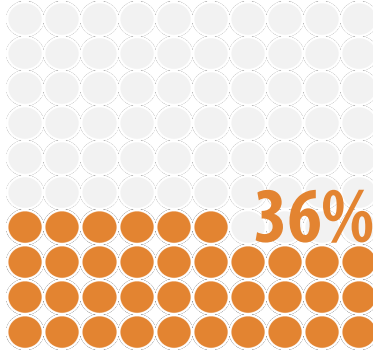
## Indiana

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

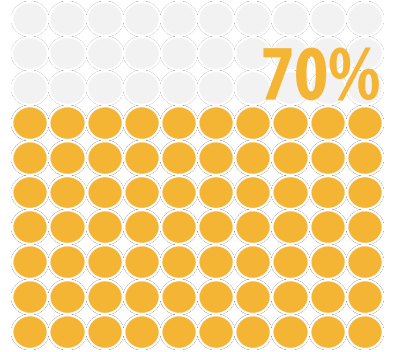
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

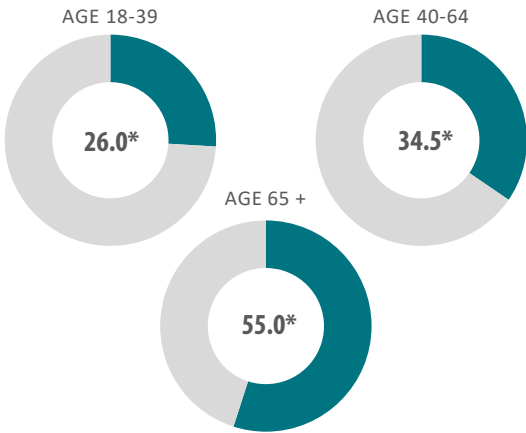
STATE RATE



HERD IMMUNITY THRESHOLD



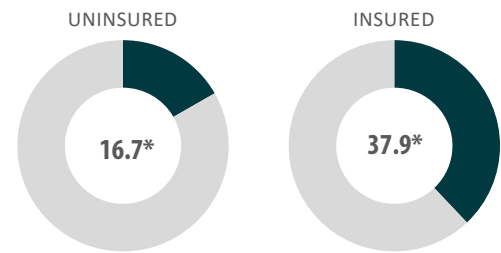
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status



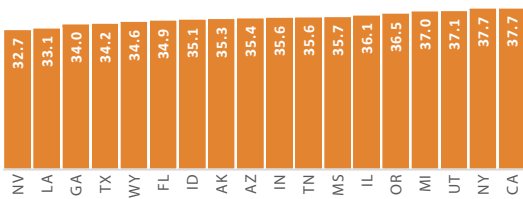
### Flu Vaccination Rates by Household Income



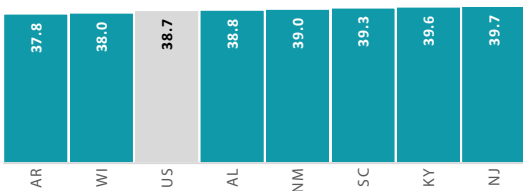
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates

**18 STATES** had flu vaccine rates significantly below the U.S. rate.



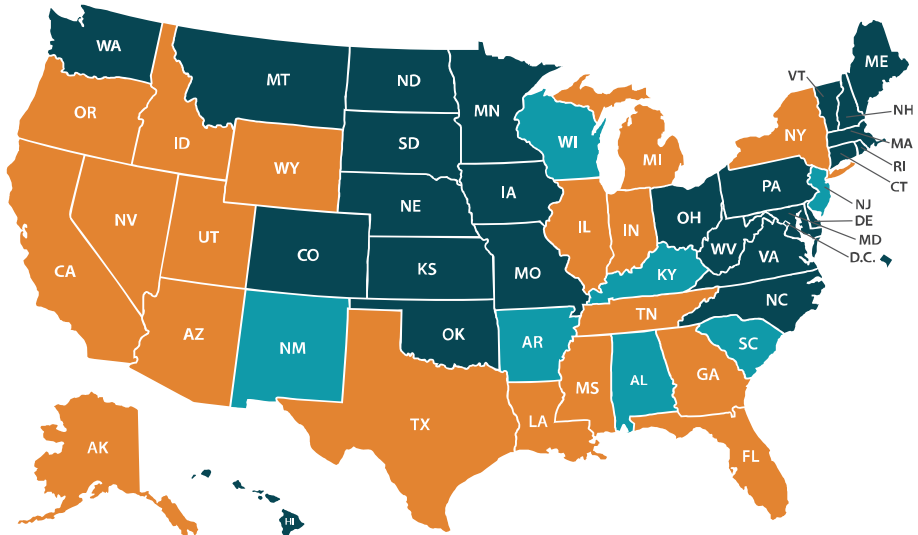
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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to visit SHADAC's State Health Compare for more data on flu vaccination rates in the states





# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Indiana	Indiana		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	35.6		-3.1*	38.7	
<b>Age</b>					
18-39	26.0	-9.6*	-2.6*	28.5	-10.2*
40-64	34.5	-1.1*	-2.6*	37.2	-1.5*
65+	55.0	19.4*	-4.4*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	37.2	1.6*	-4.5*	41.7	3.0*
Black/African American	27.6	-8.0*	-5.2*	32.8	-5.9*
Hispanic	28.6	-7.0*	-2.3	30.9	-7.7*
Asian/Pacific Islander	33.9	-1.7	-7.5	41.4	2.7*
American Indian/Alaska Native	30.1	-5.5	-3.8	33.9	-4.8*
Other/multiple	28.2	-7.4*	-6.7*	34.9	-3.8*
<b>Sex</b>					
Male	31.8	-3.8*	-3.6*	35.4	-3.3*
Female	39.4	3.8*	-2.4*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	32.3	-3.3*	-3.1*	35.4	-3.3*
1+ chronic conditions	45.1	9.5*	-4.0*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	16.7	-18.9*	-0.9	17.6	-21.1*
Insured	37.9	2.3*	-3.7*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	18.0	-17.6*	-2.2*	20.1	-18.6*
Has personal doctor	40.1	4.5*	-4.0*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	37.2		-3.0*	40.2	
Less than high school	30.0	-7.2*	-4.1*	34.0	-6.1*
High school graduate	34.3	-2.9*	-1.3	35.6	-4.6*
Some college or associate's degree	35.6	-1.6*	-3.2*	38.8	-1.4*
Bachelor's degree or higher	46.1	10.5*	-1.9*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	33.6	-2.0*	-1.1	34.8	-3.9*
\$25,000 to \$49,999	33.4	-2.2*	-3.1*	36.5	-2.2*
\$50,000 to \$74,999	35.3	-0.3	-3.3*	38.6	-0.1
\$75,000 or more	38.8	3.2*	-4.1*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

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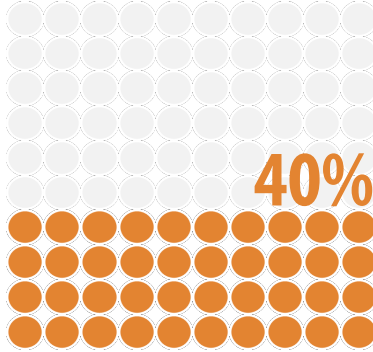
## Kansas

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

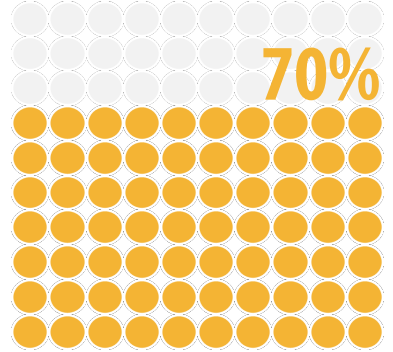
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

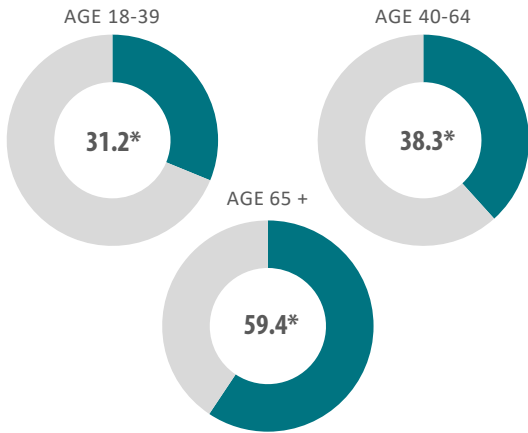
STATE RATE



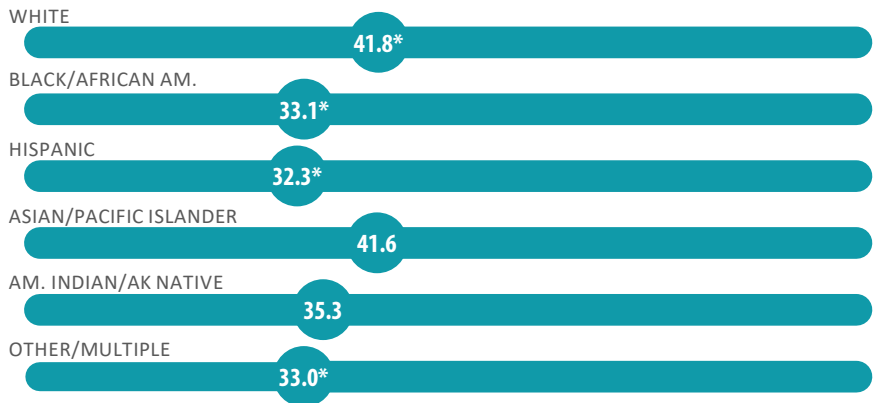
HERD IMMUNITY THRESHOLD



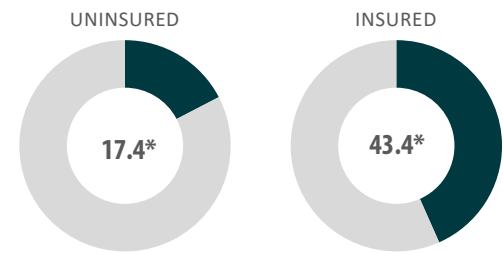
### Flu Vaccination Rates by Age



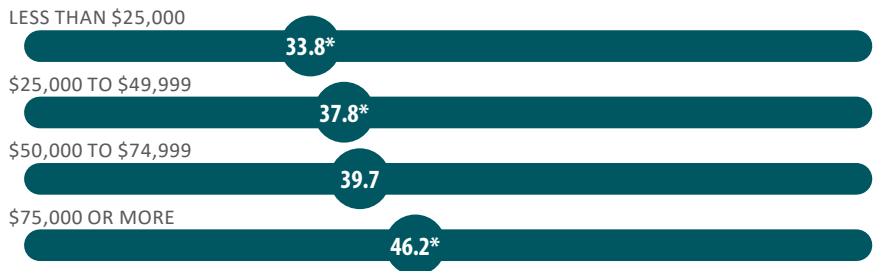
### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

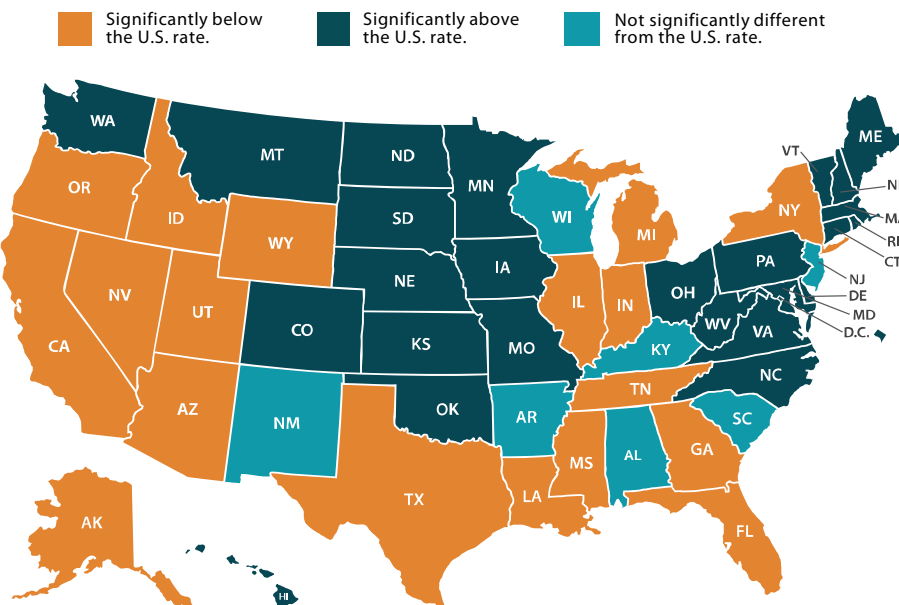
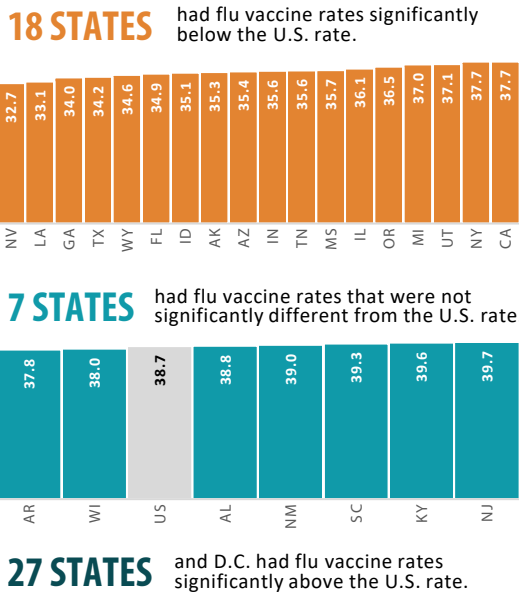


### Flu Vaccination Rates by Household Income



\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Kansas	Kansas			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	40.1		1.4*	38.7	
<b>Age</b>					
18-39	31.2	-8.9*	2.7*	28.5	-10.2*
40-64	38.3	-1.7*	1.1*	37.2	-1.5*
65+	59.4	19.3*	0.0	59.4	20.7*
<b>Race/Ethnicity</b>					
White	41.8	1.8*	0.1	41.7	3.0*
Black/African American	33.1	-7.0*	0.3	32.8	-5.9*
Hispanic	32.3	-7.8*	1.3	30.9	-7.7*
Asian/Pacific Islander	41.6	1.6	0.3	41.4	2.7*
American Indian/Alaska Native	35.3	-4.7	1.4	33.9	-4.8*
Other/multiple	33.0	-7.0*	-1.8	34.9	-3.8*
<b>Sex</b>					
Male	36.6	-3.5*	1.2*	35.4	-3.3*
Female	43.6	3.6*	1.8*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	37.4	-2.7*	2.0*	35.4	-3.3*
1+ chronic conditions	48.7	8.7*	-0.4	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	17.4	-22.7*	-0.2	17.6	-21.1*
Insured	43.4	3.3*	1.7*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	20.9	-19.1*	0.8	20.1	-18.6*
Has personal doctor	45.5	5.4*	1.4*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	41.5		1.4*	40.2	
Less than high school	30.3	-11.2*	-3.7*	34.0	-6.1*
High school graduate	35.2	-6.3*	-0.3	35.6	-4.6*
Some college or associate's degree	39.7	-1.8*	0.9	38.8	-1.4*
Bachelor's degree or higher	51.5	11.8*	3.6*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	33.8	-6.2*	-0.9	34.8	-3.9*
\$25,000 to \$49,999	37.8	-2.3*	1.3	36.5	-2.2*
\$50,000 to \$74,999	39.7	-0.4	1.1	38.6	-0.1
\$75,000 or more	46.2	6.1*	3.4*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





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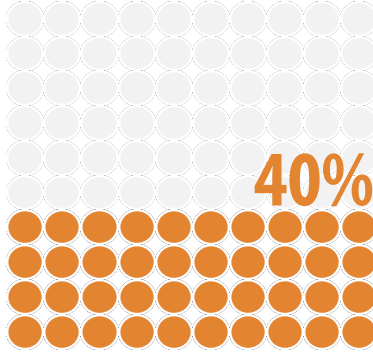
## Kentucky

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

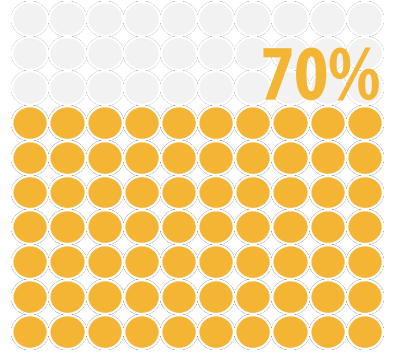
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

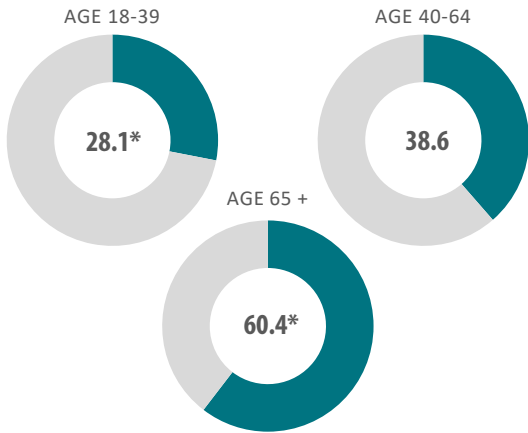
STATE RATE



HERD IMMUNITY THRESHOLD



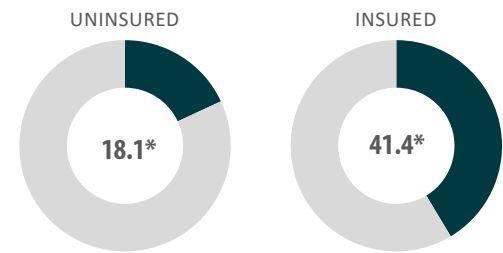
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status



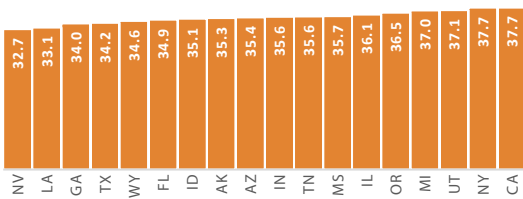
### Flu Vaccination Rates by Household Income



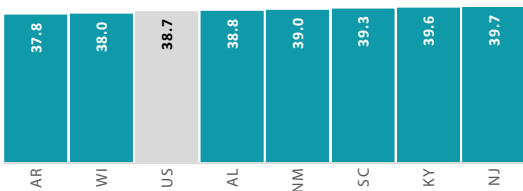
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates

**18 STATES** had flu vaccine rates significantly below the U.S. rate.



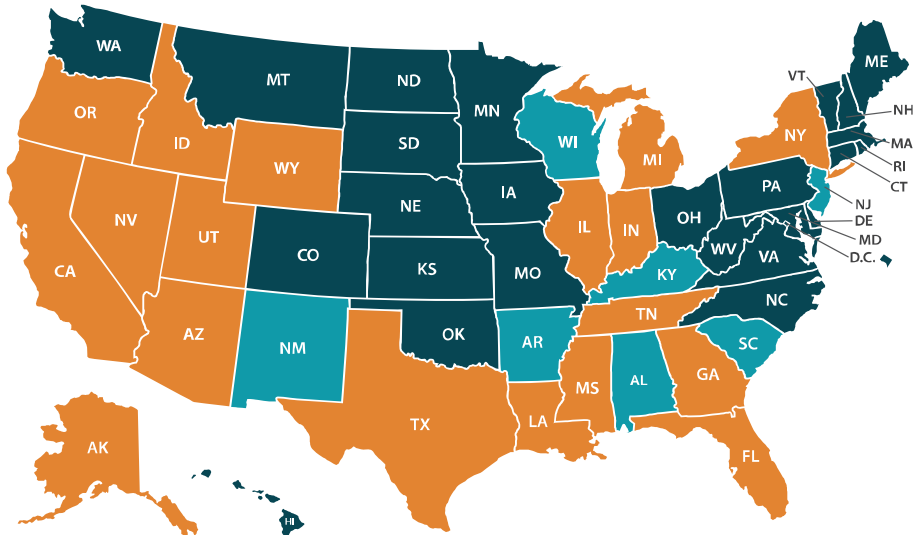
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Kentucky	Kentucky			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	39.6		0.9	38.7	
<b>Age</b>					
18-39	28.1	-11.5*	-0.5	28.5	-10.2*
40-64	38.6	-1.0	1.4	37.2	-1.5*
65+	60.4	20.9*	1.0	59.4	20.7*
<b>Race/Ethnicity</b>					
White	40.6	1.0*	-1.1*	41.7	3.0*
Black/African American	34.7	-4.8*	1.9	32.8	-5.9*
Hispanic	37.4	-2.2	6.4	30.9	-7.7*
Asian/Pacific Islander	32.8	-6.8	-8.6	41.4	2.7*
American Indian/Alaska Native	35.0	-4.6	1.1	33.9	-4.8*
Other/multiple	31.4	-8.2*	-3.5	34.9	-3.8*
<b>Sex</b>					
Male	36.0	-3.6*	0.6	35.4	-3.3*
Female	43.1	3.5*	1.3	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	35.2	-4.4*	-0.2	35.4	-3.3*
1+ chronic conditions	50.7	11.1*	1.6	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	18.1	-21.5*	0.5	17.6	-21.1*
Insured	41.4	1.8*	-0.2	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	22.9	-16.7*	2.8*	20.1	-18.6*
Has personal doctor	43.4	3.9*	-0.7	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	41.3		1.1*	40.2	
Less than high school	35.3	-5.9*	1.3	34.0	-6.1*
High school graduate	37.9	-3.4*	2.3*	35.6	-4.6*
Some college or associate's degree	39.8	-1.5	1.0	38.8	-1.4*
Bachelor's degree or higher	51.6	11.8*	3.7*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	38.0	-1.6	3.2*	34.8	-3.9*
\$25,000 to \$49,999	37.6	-2.0	1.1	36.5	-2.2*
\$50,000 to \$74,999	40.3	0.8	1.7	38.6	-0.1
\$75,000 or more	42.1	2.5*	-0.8	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

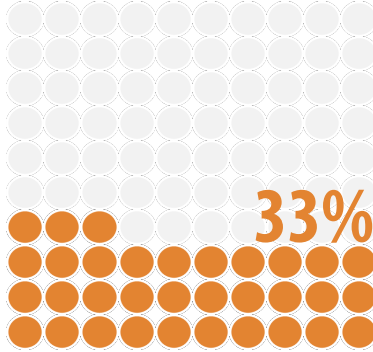
## Louisiana

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

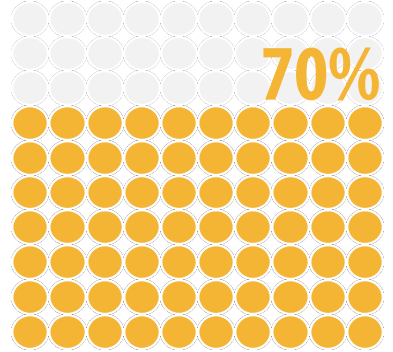
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

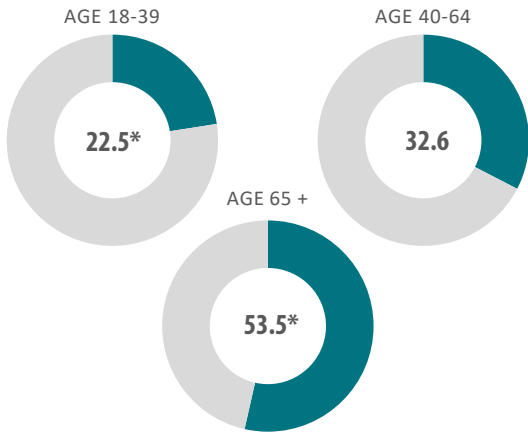
STATE RATE



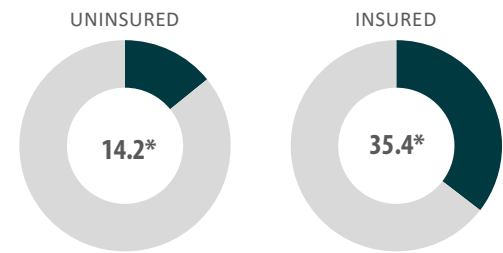
HERD IMMUNITY THRESHOLD



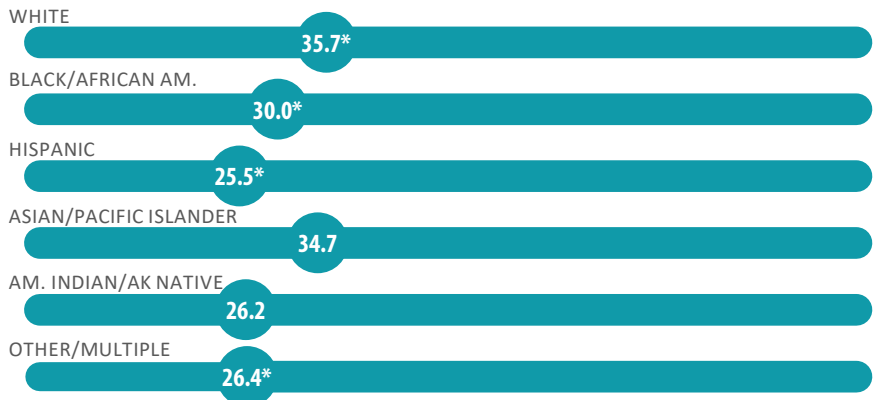
### Flu Vaccination Rates by Age



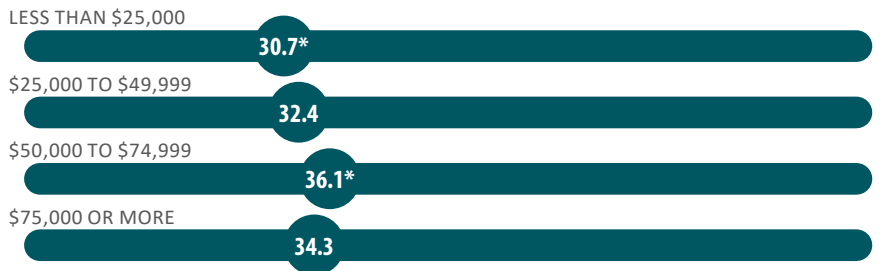
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity



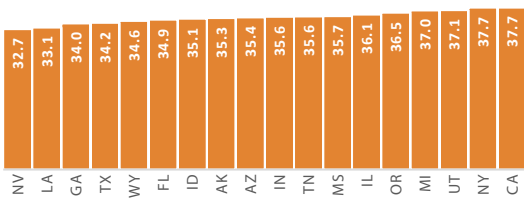
### Flu Vaccination Rates by Household Income



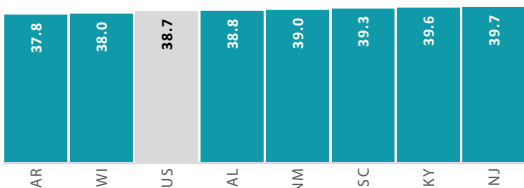
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates

**18 STATES** had flu vaccine rates significantly below the U.S. rate.



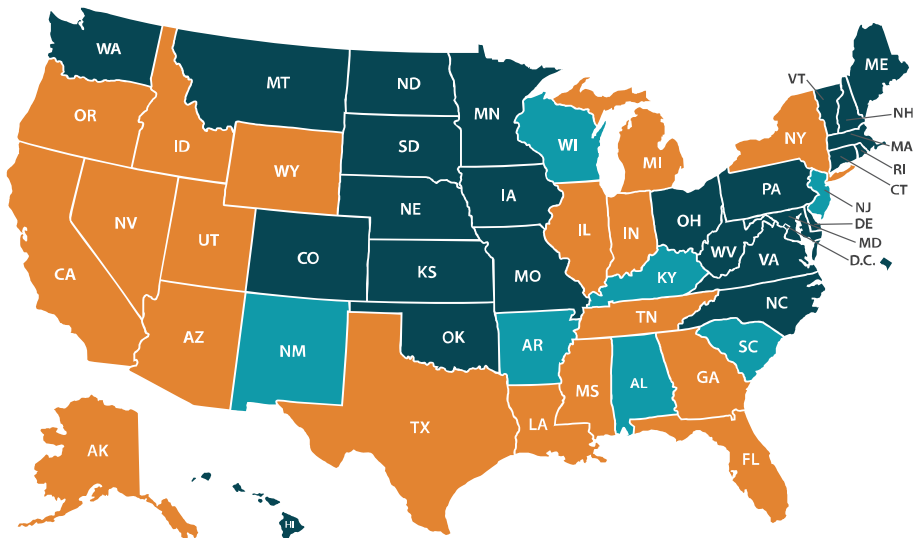
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



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Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Louisiana	Louisiana			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	33.1		-5.6*	38.7	
<b>Age</b>					
18-39	22.5	-10.5*	-6.0*	28.5	-10.2*
40-64	32.6	-0.4	-4.6*	37.2	-1.5*
65+	53.5	20.5*	-5.8*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	35.7	2.6*	-6.0*	41.7	3.0*
Black/African American	30.0	-3.1*	-2.8*	32.8	-5.9*
Hispanic	25.5	-7.6*	-5.5*	30.9	-7.7*
Asian/Pacific Islander	34.7	1.6	-6.7	41.4	2.7*
American Indian/Alaska Native	26.2	-6.8	-7.7	33.9	-4.8*
Other/multiple	26.4	-6.7*	-8.5*	34.9	-3.8*
<b>Sex</b>					
Male	29.9	-3.1*	-5.5*	35.4	-3.3*
Female	36.1	3.0*	-5.7*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	29.2	-3.9*	-6.2*	35.4	-3.3*
1+ chronic conditions	43.8	10.8*	-5.3*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	14.2	-18.9*	-3.4*	17.6	-21.1*
Insured	35.4	2.4*	-6.2*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	16.1	-17.0*	-4.0*	20.1	-18.6*
Has personal doctor	38.0	5.0*	-6.1*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	34.7		-5.4*	40.2	
Less than high school	31.3	-3.4*	-2.8	34.0	-6.1*
High school graduate	30.2	-4.5*	-5.4*	35.6	-4.6*
Some college or associate's degree	35.6	0.9	-3.2*	38.8	-1.4*
Bachelor's degree or higher	42.3	6.7*	-5.6*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	30.7	-2.4*	-4.1*	34.8	-3.9*
\$25,000 to \$49,999	32.4	-0.6	-4.1*	36.5	-2.2*
\$50,000 to \$74,999	36.1	3.0*	-2.5	38.6	-0.1
\$75,000 or more	34.3	1.2	-8.5*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

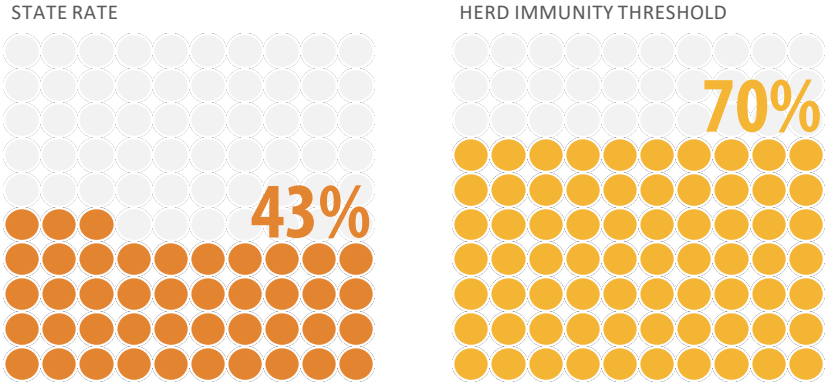
SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

## Massachusetts

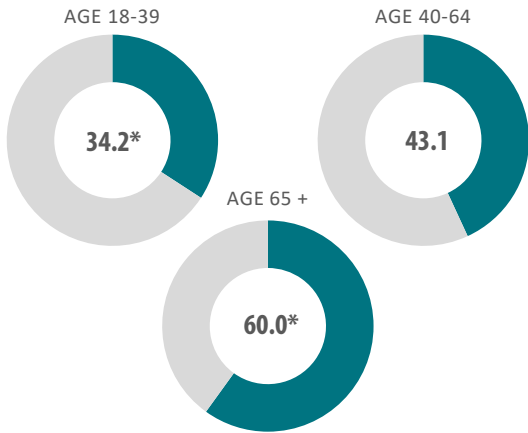
Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

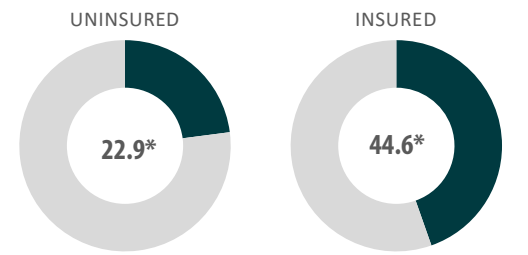
### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold



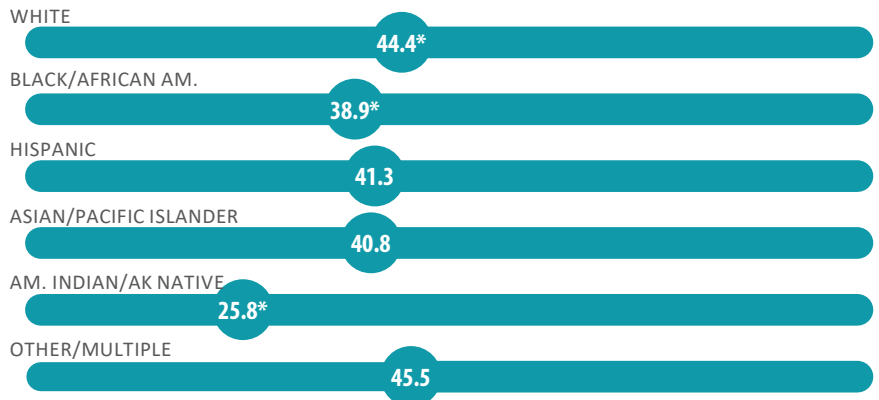
### Flu Vaccination Rates by Age



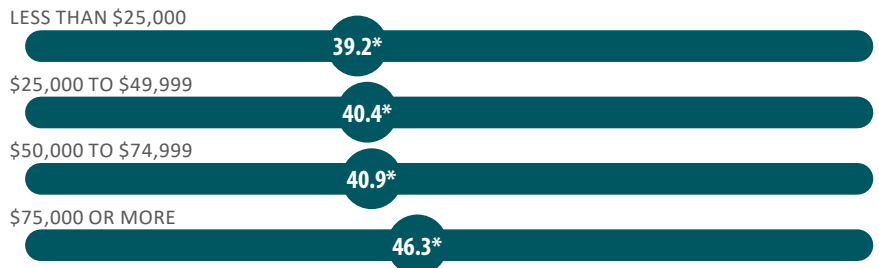
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

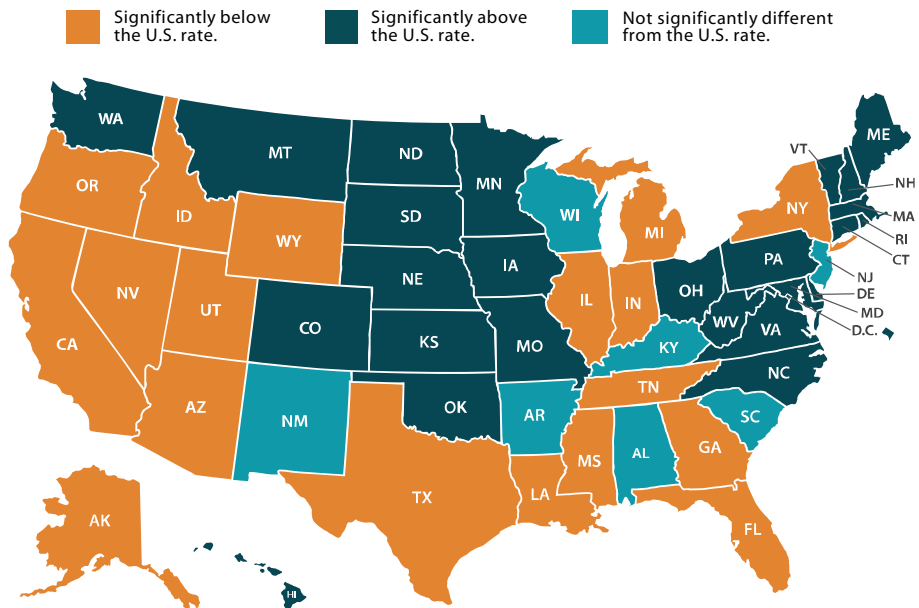
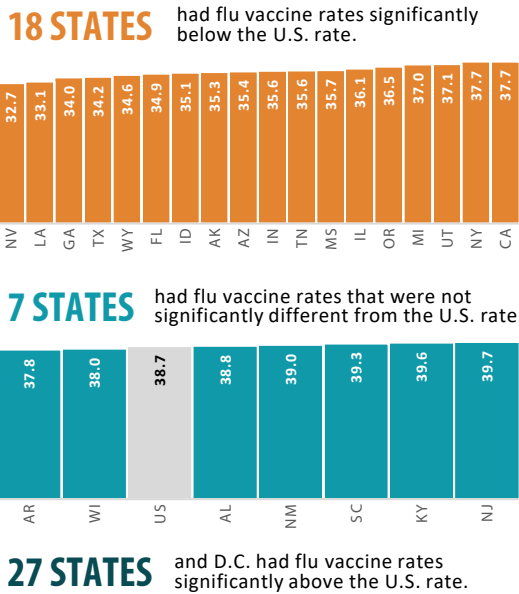


### Flu Vaccination Rates by Household Income



\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



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[CLICK HERE](#) to visit SHADAC's State Health Compare for more data on flu vaccination rates in the states





# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Massachusetts	Massachusetts			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	43.4		4.8*	38.7	
<b>Age</b>					
18-39	34.2	-9.3*	5.7*	28.5	-10.2*
40-64	43.1	-0.3	5.9*	37.2	-1.5*
65+	60.0	16.5*	0.6	59.4	20.7*
<b>Race/Ethnicity</b>					
White	44.4	1.0*	2.7*	41.7	3.0*
Black/African American	38.9	-4.5*	6.1*	32.8	-5.9*
Hispanic	41.3	-2.2	10.3*	30.9	-7.7*
Asian/Pacific Islander	40.8	-2.6	-0.6	41.4	2.7*
American Indian/Alaska Native	25.8	-17.7*	-8.1	33.9	-4.8*
Other/multiple	45.5	2.1	10.7*	34.9	-3.8*
<b>Sex</b>					
Male	39.6	-3.9*	4.2*	35.4	-3.3*
Female	46.7	3.3*	4.9*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	41.0	-2.5*	5.6*	35.4	-3.3*
1+ chronic conditions	51.3	7.9*	2.2*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	22.9	-20.5*	5.4*	17.6	-21.1*
Insured	44.6	1.2*	3.0*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	25.4	-18.0*	5.3*	20.1	-18.6*
Has personal doctor	46.1	2.6*	2.0*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	44.4		4.3*	40.2	
Less than high school	42.7	-1.8	8.6*	34.0	-6.1*
High school graduate	36.6	-7.8*	1.1	35.6	-4.6*
Some college or associate's degree	41.2	-3.2*	2.4*	38.8	-1.4*
Bachelor's degree or higher	51.2	10.0*	3.3*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	39.2	-4.2*	4.5*	34.8	-3.9*
\$25,000 to \$49,999	40.4	-3.0*	3.9*	36.5	-2.2*
\$50,000 to \$74,999	40.9	-2.5*	2.3	38.6	-0.1
\$75,000 or more	46.3	2.8*	3.5*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

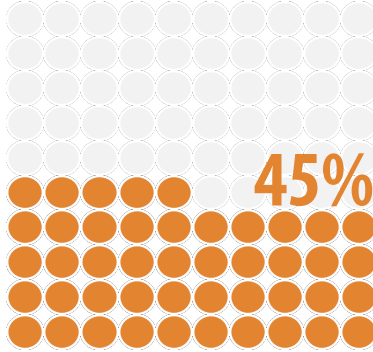
## Maryland

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

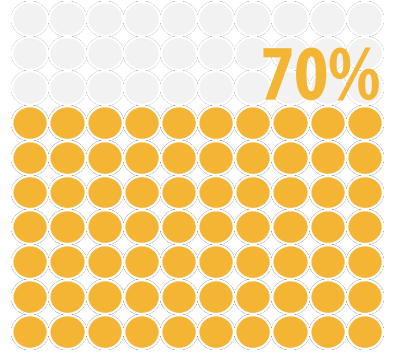
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

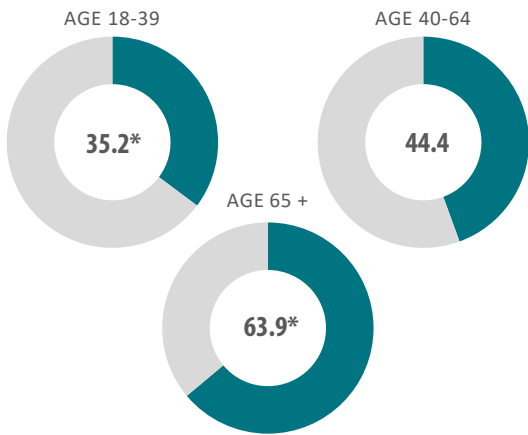
STATE RATE



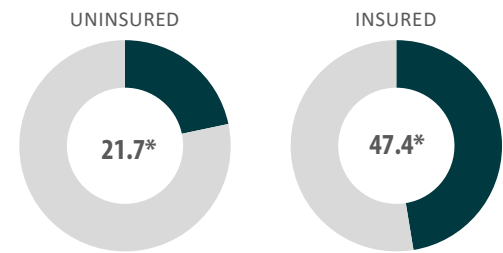
HERD IMMUNITY THRESHOLD



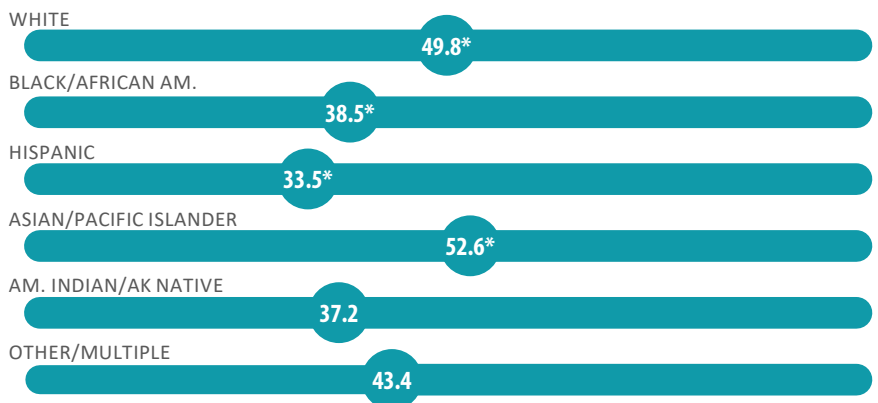
### Flu Vaccination Rates by Age



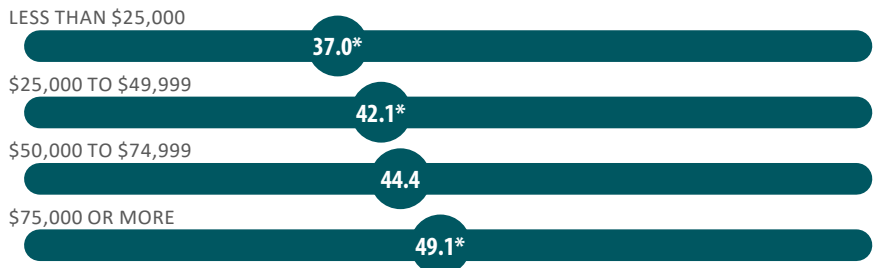
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

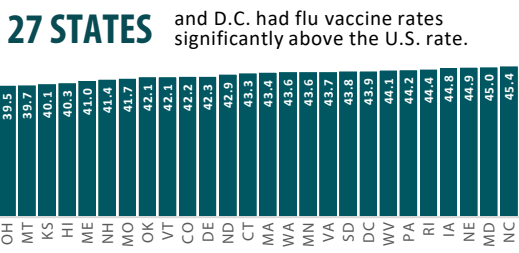
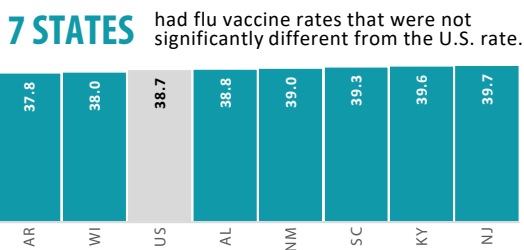
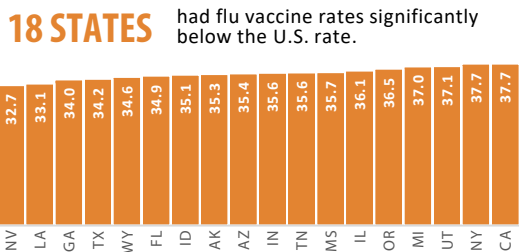


### Flu Vaccination Rates by Household Income

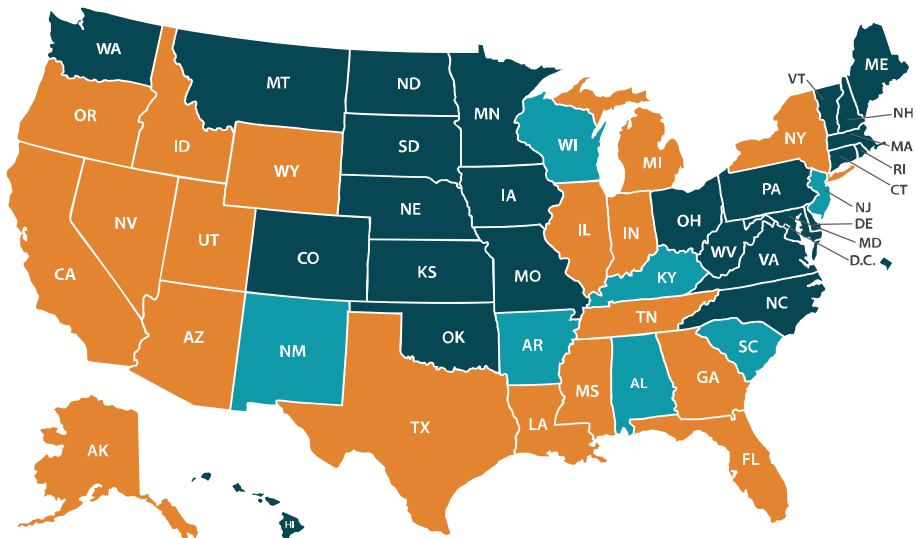


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Maryland	Maryland			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	45.0		6.4*	38.7	
<b>Age</b>					
18-39	35.2	-9.8*	6.7*	28.5	-10.2*
40-64	44.4	-0.6	7.3*	37.2	-1.5*
65+	63.9	18.9*	4.5*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	49.8	4.8*	8.1*	41.7	3.0*
Black/African American	38.5	-6.6*	5.7*	32.8	-5.9*
Hispanic	33.5	-11.5*	2.6	30.9	-7.7*
Asian/Pacific Islander	52.6	7.6*	11.2*	41.4	2.7*
American Indian/Alaska Native	37.2	-7.9	3.3	33.9	-4.8*
Other/multiple	43.4	-1.6	8.6*	34.9	-3.8*
<b>Sex</b>					
Male	41.9	-3.2*	6.5*	35.4	-3.3*
Female	48.1	3.0*	6.3*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	42.4	-2.7*	7.0*	35.4	-3.3*
1+ chronic conditions	54.0	8.9*	4.8*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	21.7	-23.4*	4.1*	17.6	-21.1*
Insured	47.4	2.4*	5.8*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	24.0	-21.0*	3.9*	20.1	-18.6*
Has personal doctor	49.1	4.0*	5.0*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	46.3		6.2*	40.2	
Less than high school	34.6	-11.7*	0.6	34.0	-6.1*
High school graduate	40.3	-6.1*	4.7*	35.6	-4.6*
Some college or associate's degree	43.8	-2.6*	5.0*	38.8	-1.4*
Bachelor's degree or higher	54.8	11.1*	6.9*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	37.0	-8.0*	2.3*	34.8	-3.9*
\$25,000 to \$49,999	42.1	-2.9*	5.6*	36.5	-2.2*
\$50,000 to \$74,999	44.4	-0.6	5.8*	38.6	-0.1
\$75,000 or more	49.1	4.0*	6.3*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

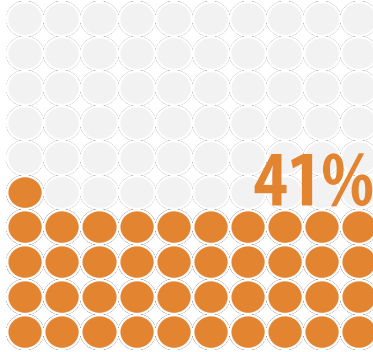
## Maine

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

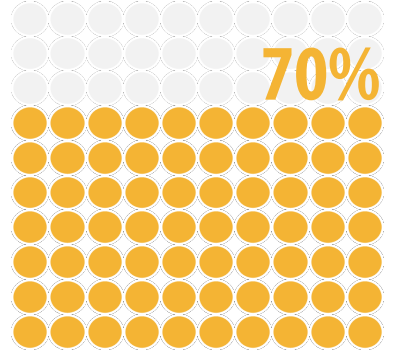
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

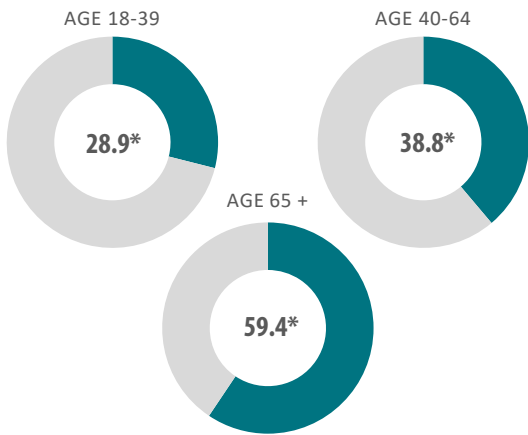
STATE RATE



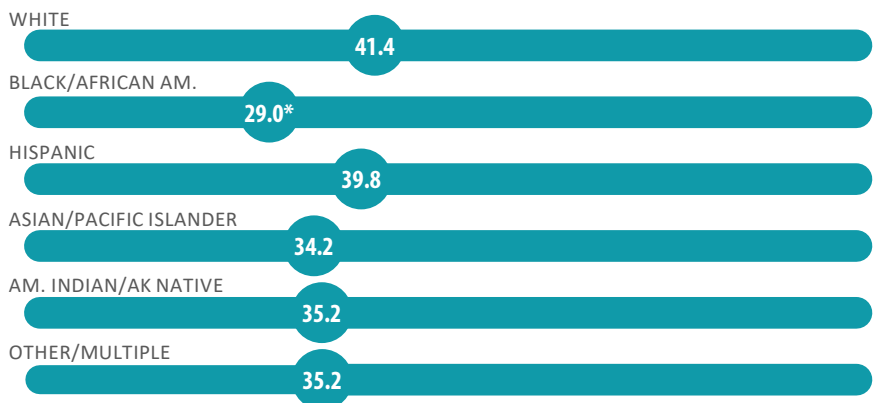
HERD IMMUNITY THRESHOLD



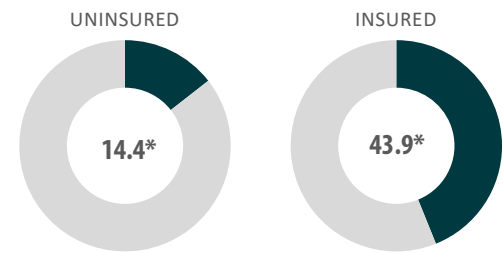
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

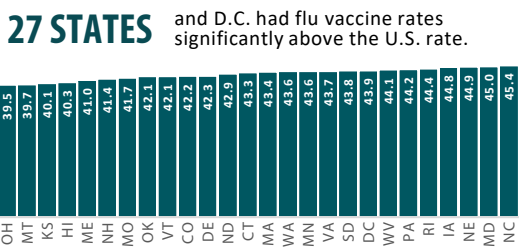
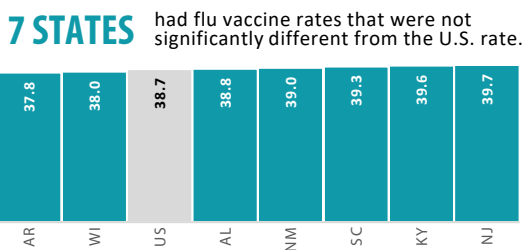
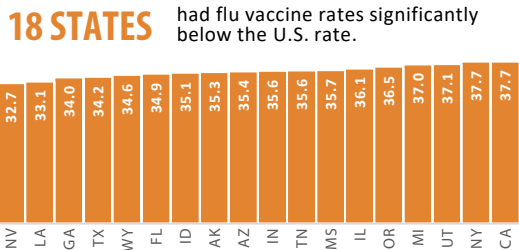


### Flu Vaccination Rates by Household Income

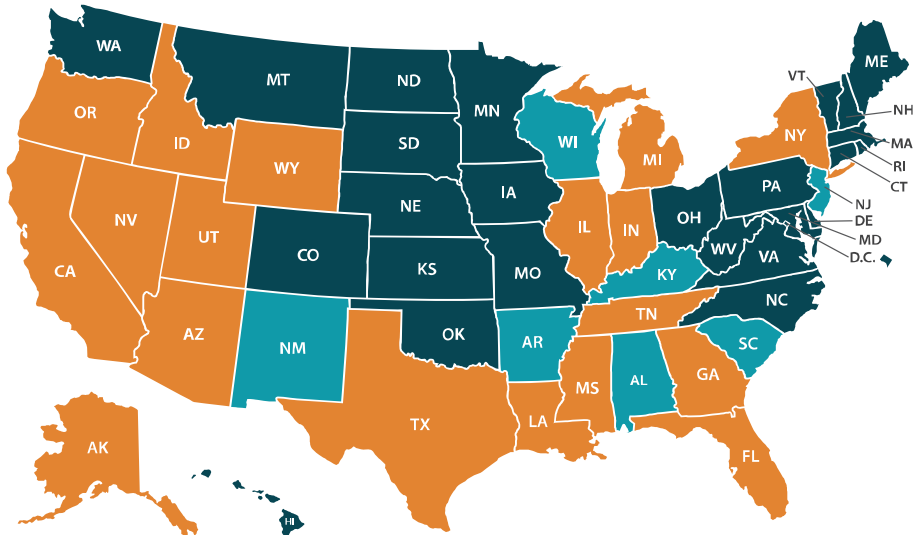


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Maine	Maine			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	41.0		2.3*	38.7	
<b>Age</b>					
18-39	28.9	-12.0*	0.4	28.5	-10.2*
40-64	38.8	-2.1*	1.7*	37.2	-1.5*
65+	59.4	18.4*	0.0	59.4	20.7*
<b>Race/Ethnicity</b>					
White	41.4	0.4	-0.3	41.7	3.0*
Black/African American	29.0	-12.0*	-3.8	32.8	-5.9*
Hispanic	39.8	-1.2	8.9	30.9	-7.7*
Asian/Pacific Islander	34.2	-6.7	-7.1	41.4	2.7*
American Indian/Alaska Native	35.2	-5.8	1.3	33.9	-4.8*
Other/multiple	35.2	-5.8	0.3	34.9	-3.8*
<b>Sex</b>					
Male	37.0	-3.9*	1.7*	35.4	-3.3*
Female	44.7	3.7*	2.9*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	37.9	-3.0*	2.5*	35.4	-3.3*
1+ chronic conditions	49.3	8.3*	0.1	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	14.4	-26.5*	-3.1*	17.6	-21.1*
Insured	43.9	2.9*	2.3*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	15.9	-25.1*	-4.2*	20.1	-18.6*
Has personal doctor	45.1	4.1*	1.0	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	42.2		2.0*	40.2	
Less than high school	35.7	-6.5*	1.6	34.0	-6.1*
High school graduate	35.9	-6.3*	0.4	35.6	-4.6*
Some college or associate's degree	41.3	-0.9	2.5*	38.8	-1.4*
Bachelor's degree or higher	50.9	9.6*	3.0*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	36.0	-5.0*	1.2	34.8	-3.9*
\$25,000 to \$49,999	39.7	-1.3	3.2*	36.5	-2.2*
\$50,000 to \$74,999	39.4	-1.5	0.8	38.6	-0.1
\$75,000 or more	47.0	6.0*	4.2*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

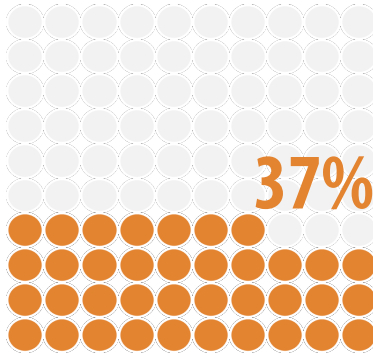
## Michigan

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

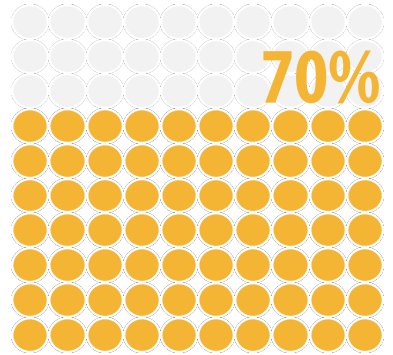
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

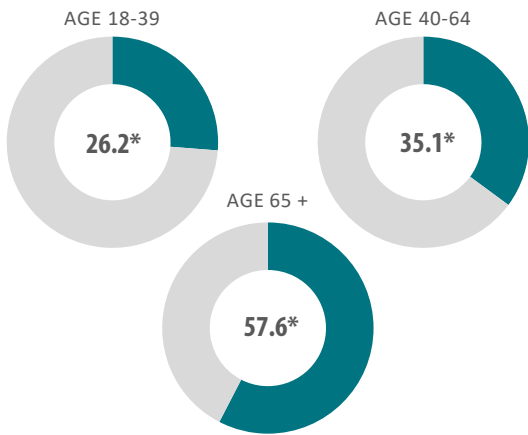
STATE RATE



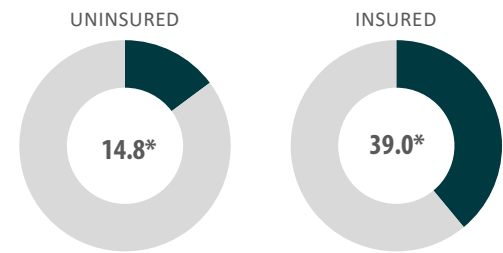
HERD IMMUNITY THRESHOLD



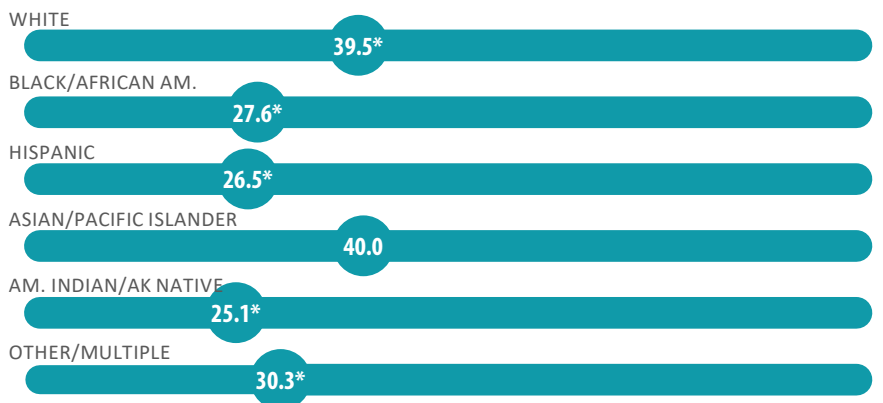
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

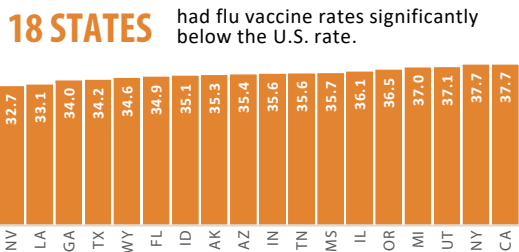


### Flu Vaccination Rates by Household Income

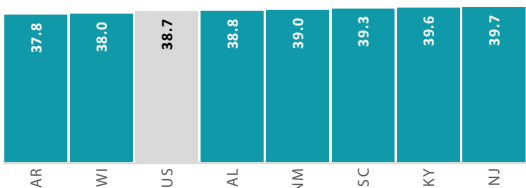


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



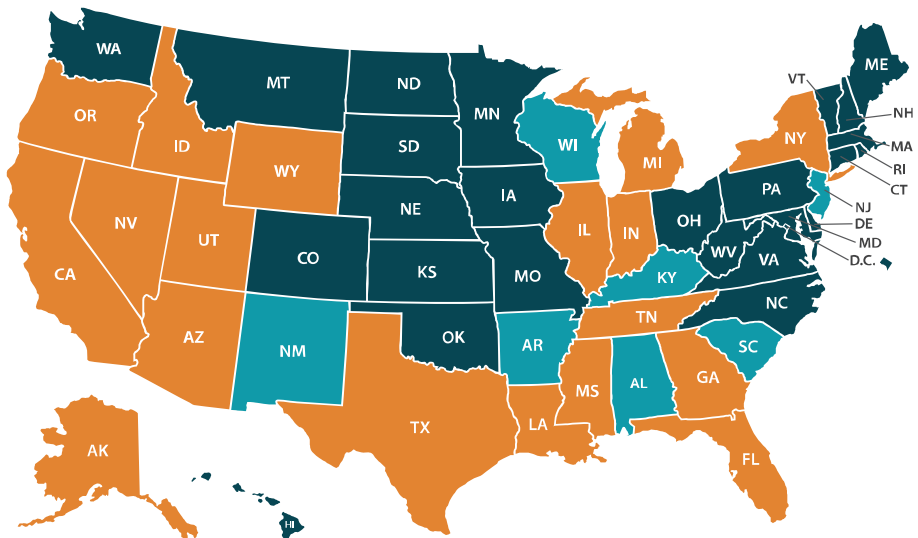
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Michigan	Michigan			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	37.0		-1.7*	38.7	
<b>Age</b>					
18-39	26.2	-10.8*	-2.3*	28.5	-10.2*
40-64	35.1	-1.9*	-2.1*	37.2	-1.5*
65+	57.6	20.6*	-1.8*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	39.5	2.4*	-2.2*	41.7	3.0*
Black/African American	27.6	-9.4*	-5.2*	32.8	-5.9*
Hispanic	26.5	-10.5*	-4.5*	30.9	-7.7*
Asian/Pacific Islander	40.0	3.0	-1.3	41.4	2.7*
American Indian/Alaska Native	25.1	-11.9*	-8.8*	33.9	-4.8*
Other/multiple	30.3	-6.7*	-4.5*	34.9	-3.8*
<b>Sex</b>					
Male	34.1	-2.9*	-1.3*	35.4	-3.3*
Female	39.7	2.7*	-2.1*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	33.7	-3.3*	-1.7*	35.4	-3.3*
1+ chronic conditions	46.0	9.0*	-3.2*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	14.8	-22.2*	-2.8*	17.6	-21.1*
Insured	39.0	2.0*	-2.6*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	16.0	-21.0*	-4.1*	20.1	-18.6*
Has personal doctor	40.7	3.7*	-3.4*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	38.6		-1.6*	40.2	
Less than high school	27.7	-10.8*	-6.3*	34.0	-6.1*
High school graduate	34.8	-3.7*	-0.7	35.6	-4.6*
Some college or associate's degree	37.8	-0.8	-1.0	38.8	-1.4*
Bachelor's degree or higher	46.9	9.1*	-1.1	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	32.4	-4.6*	-2.3*	34.8	-3.9*
\$25,000 to \$49,999	36.6	-0.4	0.1	36.5	-2.2*
\$50,000 to \$74,999	38.1	1.1	-0.5	38.6	-0.1
\$75,000 or more	40.4	3.4*	-2.4*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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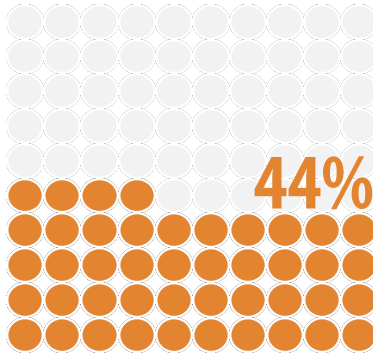
## Minnesota

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

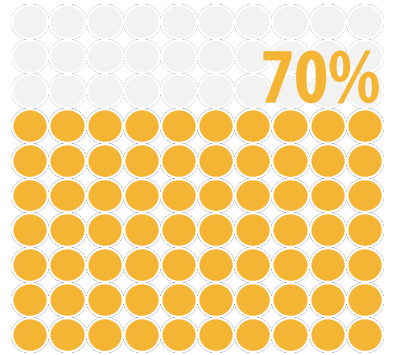
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

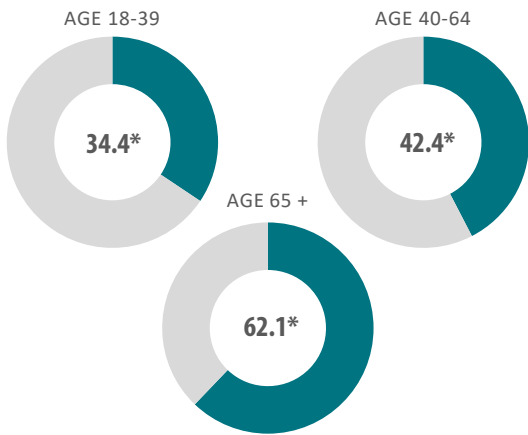
STATE RATE



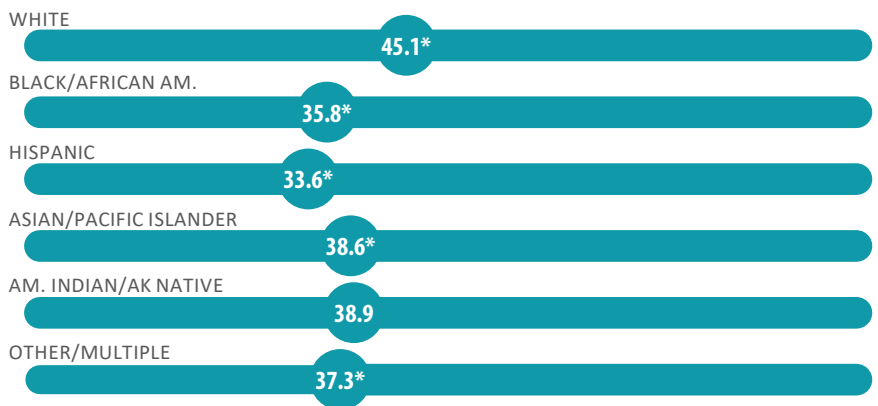
HERD IMMUNITY THRESHOLD



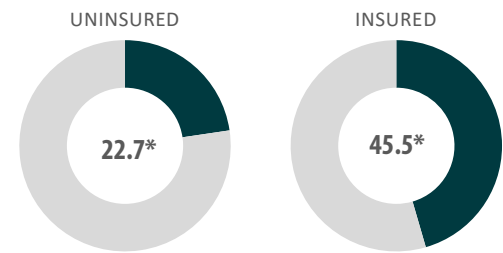
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

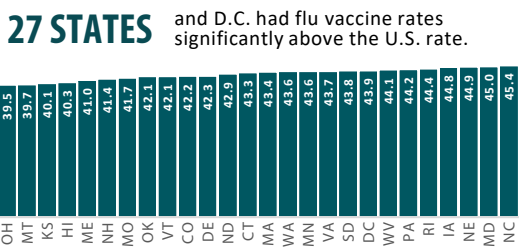
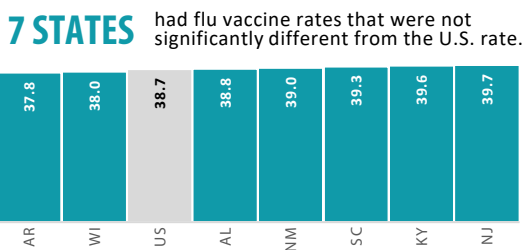
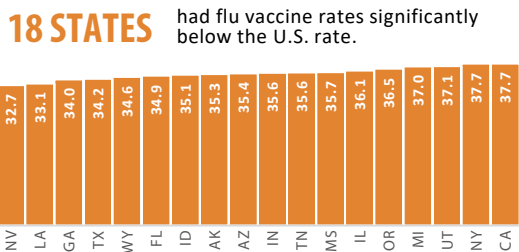


### Flu Vaccination Rates by Household Income

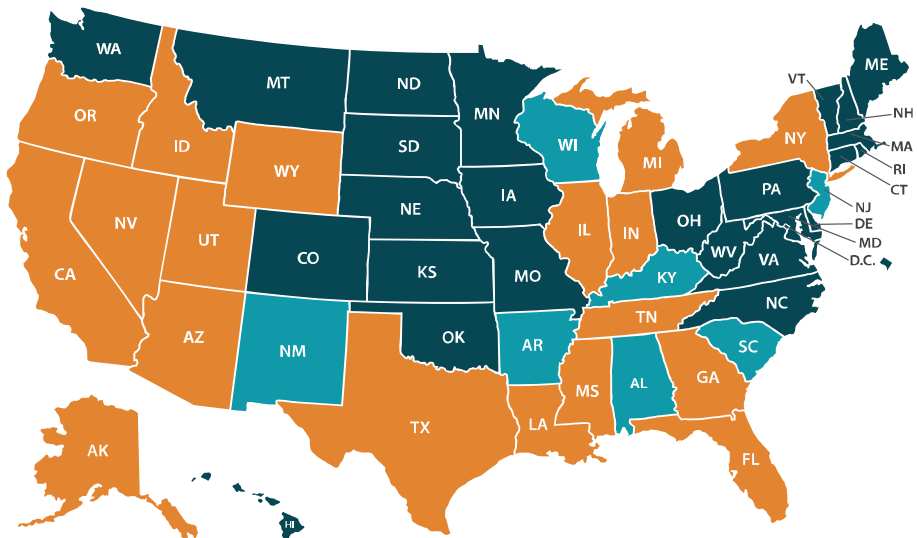


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Minnesota	Minnesota		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	43.6		4.9*	38.7	
<b>Age</b>					
18-39	34.4	-9.2*	5.9*	28.5	-10.2*
40-64	42.4	-1.2*	5.2*	37.2	-1.5*
65+	62.1	18.5*	2.8*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	45.1	1.5*	3.4*	41.7	3.0*
Black/African American	35.8	-7.9*	3.0	32.8	-5.9*
Hispanic	33.6	-10.1*	2.6	30.9	-7.7*
Asian/Pacific Islander	38.6	-5.1*	-2.8	41.4	2.7*
American Indian/Alaska Native	38.9	-4.7	5.1	33.9	-4.8*
Other/multiple	37.3	-6.3*	2.5	34.9	-3.8*
<b>Sex</b>					
Male	38.7	-4.9*	3.3*	35.4	-3.3*
Female	48.4	4.8*	6.6*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	40.9	-2.7*	5.5*	35.4	-3.3*
1+ chronic conditions	54.5	10.9*	5.4*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	22.7	-20.9*	5.1*	17.6	-21.1*
Insured	45.5	1.9*	3.9*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	25.4	-18.2*	5.3*	20.1	-18.6*
Has personal doctor	49.6	6.0*	5.5*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	45.1		5.0*	40.2	
Less than high school	37.2	-7.9*	3.2*	34.0	-6.1*
High school graduate	38.3	-6.9*	2.7*	35.6	-4.6*
Some college or associate's degree	43.4	-1.8*	4.6*	38.8	-1.4*
Bachelor's degree or higher	53.2	9.8*	5.3*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	39.4	-4.2*	4.6*	34.8	-3.9*
\$25,000 to \$49,999	40.6	-3.0*	4.1*	36.5	-2.2*
\$50,000 to \$74,999	43.5	-0.1	4.9*	38.6	-0.1
\$75,000 or more	47.3	3.7*	4.5*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





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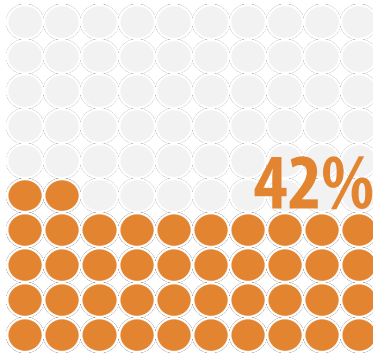
## Missouri

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

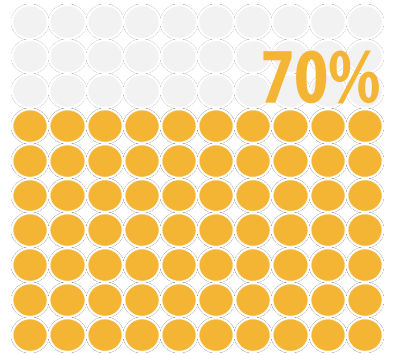
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

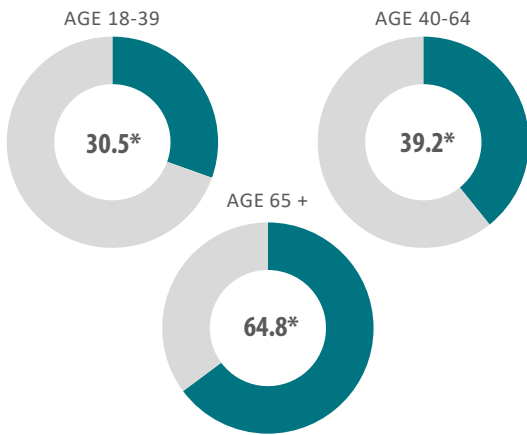
STATE RATE



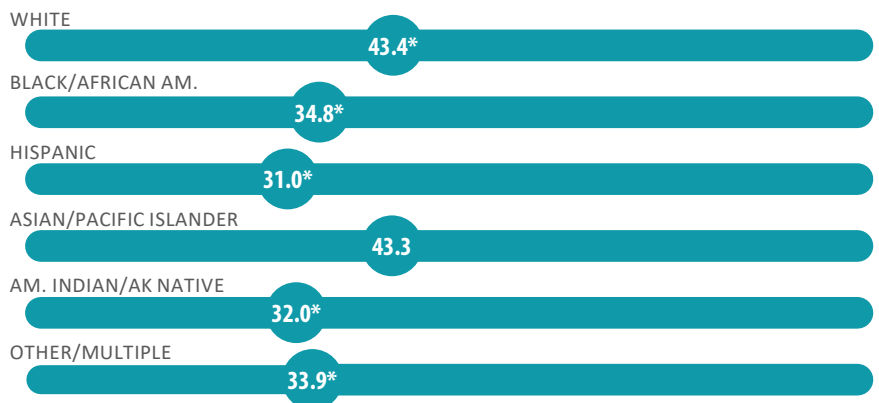
HERD IMMUNITY THRESHOLD



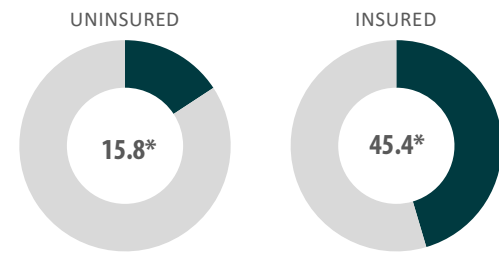
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

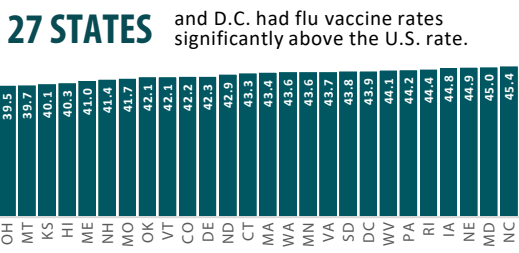
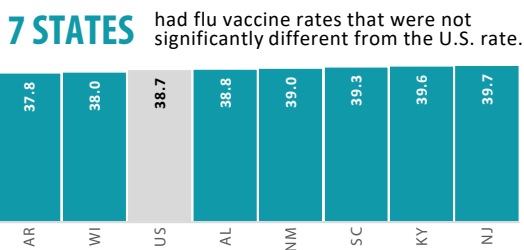
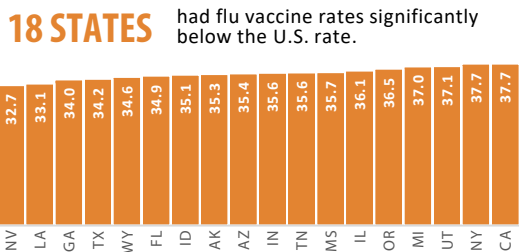


### Flu Vaccination Rates by Household Income

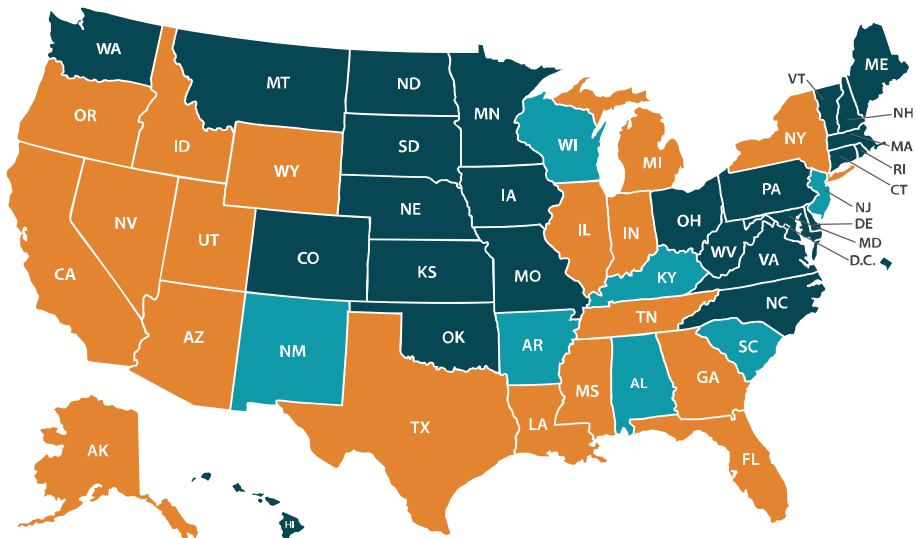


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### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Missouri	Missouri		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	41.7		3.0*	38.7	
<b>Age</b>					
18-39	30.5	-11.2*	1.9*	28.5	-10.2*
40-64	39.2	-2.5*	2.0*	37.2	-1.5*
65+	64.8	23.1*	5.4*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	43.4	1.8*	1.7*	41.7	3.0*
Black/African American	34.8	-6.9*	2.0	32.8	-5.9*
Hispanic	31.0	-10.6*	0.1	30.9	-7.7*
Asian/Pacific Islander	43.3	1.6	1.9	41.4	2.7*
American Indian/Alaska Native	32.0	-9.6*	-1.8	33.9	-4.8*
Other/multiple	33.9	-7.8*	-0.9	34.9	-3.8*
<b>Sex</b>					
Male	37.3	-4.4*	1.9*	35.4	-3.3*
Female	46.0	4.3*	4.2*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	38.3	-3.4*	2.8*	35.4	-3.3*
1+ chronic conditions	52.3	10.6*	3.1*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	15.8	-25.9*	-1.8	17.6	-21.1*
Insured	45.4	3.7*	3.8*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	20.5	-21.2*	0.4	20.1	-18.6*
Has personal doctor	48.0	6.3*	3.9*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	43.7		3.5*	40.2	
Less than high school	35.9	-7.7*	1.9	34.0	-6.1*
High school graduate	40.0	-3.7*	4.4*	35.6	-4.6*
Some college or associate's degree	41.5	-2.2*	2.7*	38.8	-1.4*
Bachelor's degree or higher	53.1	11.7*	5.2*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	37.6	-4.1*	2.9*	34.8	-3.9*
\$25,000 to \$49,999	38.8	-2.9*	2.3*	36.5	-2.2*
\$50,000 to \$74,999	42.1	0.5	3.5*	38.6	-0.1
\$75,000 or more	47.1	5.4*	4.3*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

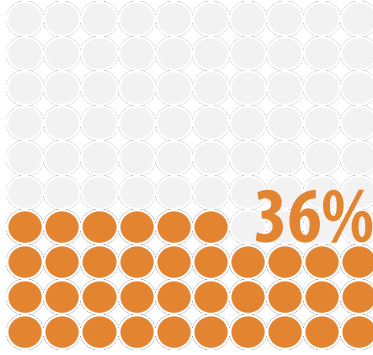
## Mississippi

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

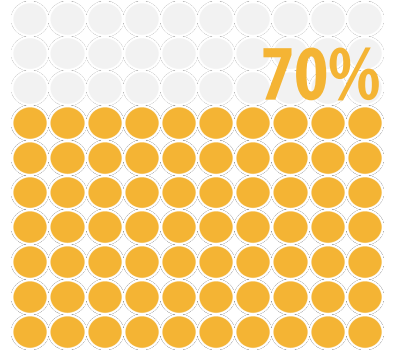
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

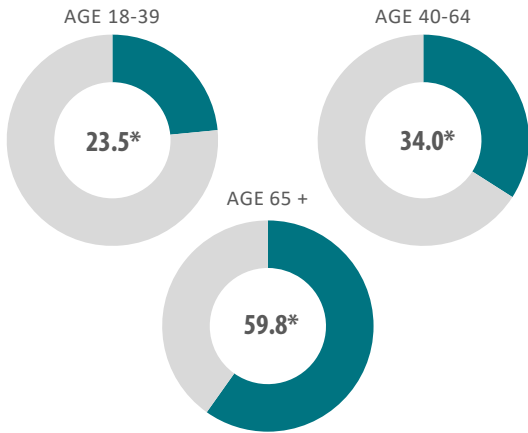
STATE RATE



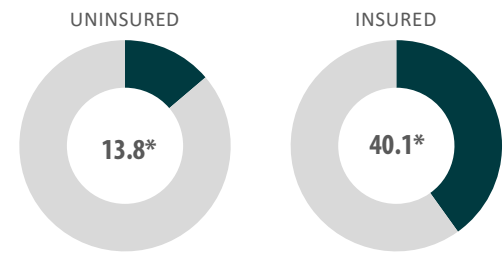
HERD IMMUNITY THRESHOLD



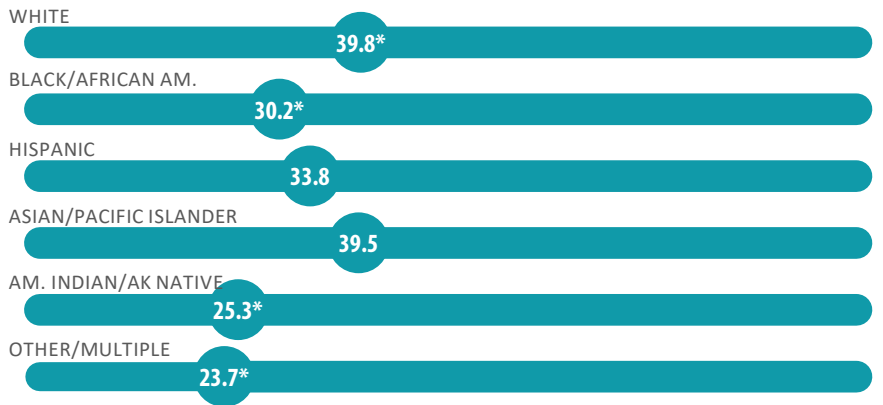
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

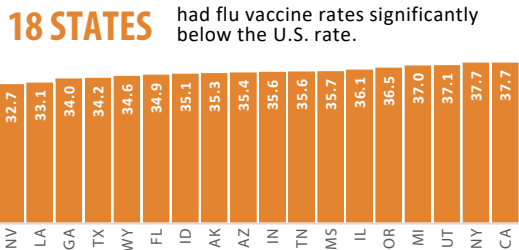


### Flu Vaccination Rates by Household Income

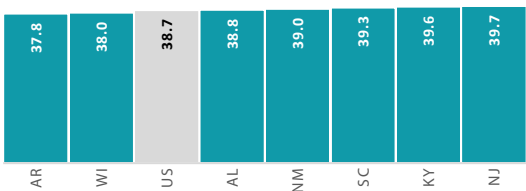


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



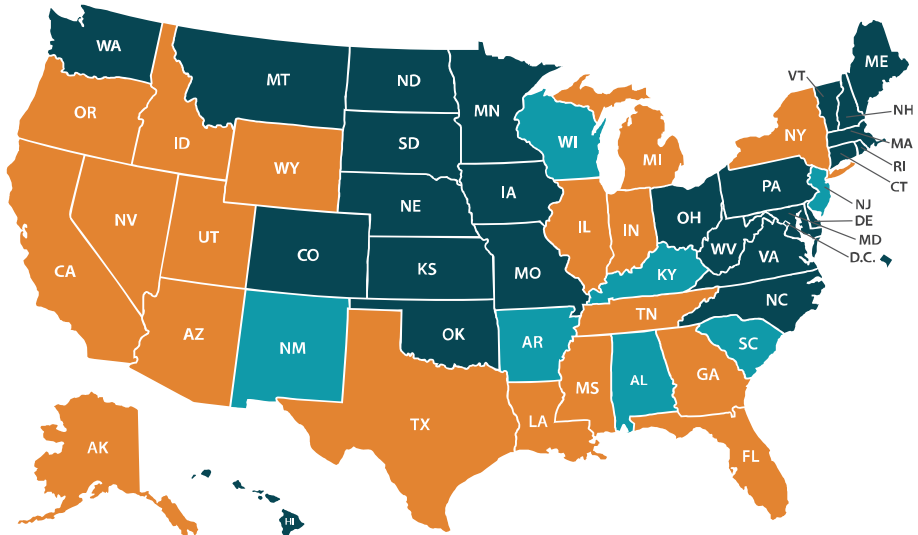
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Mississippi	Mississippi		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	35.7		-3.0*	38.7	
<b>Age</b>					
18-39	23.5	-12.3*	-5.1*	28.5	-10.2*
40-64	34.0	-1.7*	-3.1*	37.2	-1.5*
65+	59.8	24.1*	0.4	59.4	20.7*
<b>Race/Ethnicity</b>					
White	39.8	4.0*	-2.0*	41.7	3.0*
Black/African American	30.2	-5.6*	-2.6*	32.8	-5.9*
Hispanic	33.8	-2.0	2.8	30.9	-7.7*
Asian/Pacific Islander	39.5	3.8	-1.9	41.4	2.7*
American Indian/Alaska Native	25.3	-10.4*	-8.6	33.9	-4.8*
Other/multiple	23.7	-12.0*	-11.2*	34.9	-3.8*
<b>Sex</b>					
Male	32.7	-3.0*	-2.7*	35.4	-3.3*
Female	38.6	2.9*	-3.2*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	31.2	-4.6*	-4.3*	35.4	-3.3*
1+ chronic conditions	47.5	11.8*	-1.7	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	13.8	-21.9*	-3.8*	17.6	-21.1*
Insured	40.1	4.4*	-1.5*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	17.8	-17.9*	-2.3*	20.1	-18.6*
Has personal doctor	41.6	5.9*	-2.5*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	37.9		-2.2*	40.2	
Less than high school	35.5	-2.5	1.4	34.0	-6.1*
High school graduate	35.7	-2.3*	0.1	35.6	-4.6*
Some college or associate's degree	36.4	-1.6*	-2.4*	38.8	-1.4*
Bachelor's degree or higher	45.4	9.0*	-2.6*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	32.3	-3.5*	-2.5*	34.8	-3.9*
\$25,000 to \$49,999	35.2	-0.5	-1.3	36.5	-2.2*
\$50,000 to \$74,999	35.7	0.0	-2.9	38.6	-0.1
\$75,000 or more	41.9	6.2*	-0.9	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

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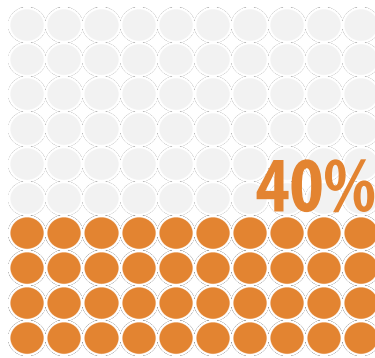
## Montana

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

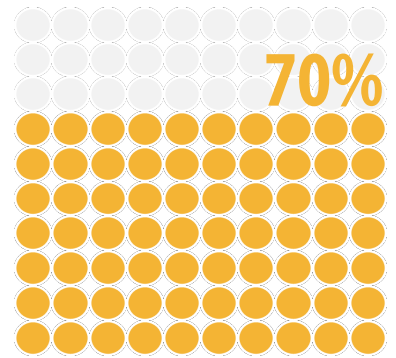
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

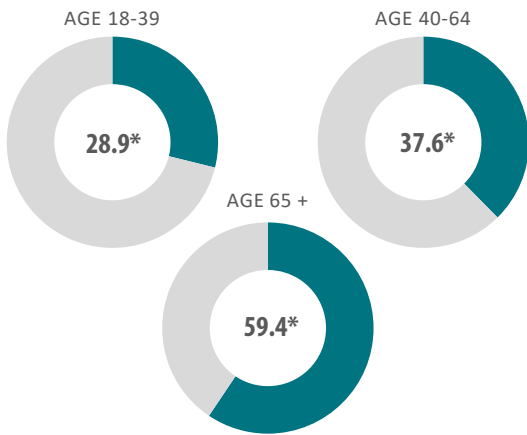
STATE RATE



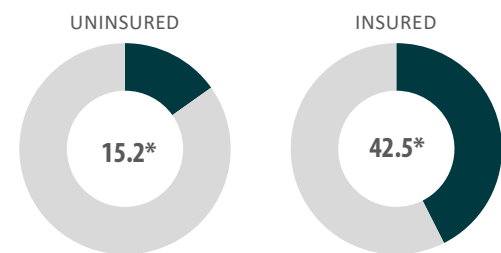
HERD IMMUNITY THRESHOLD



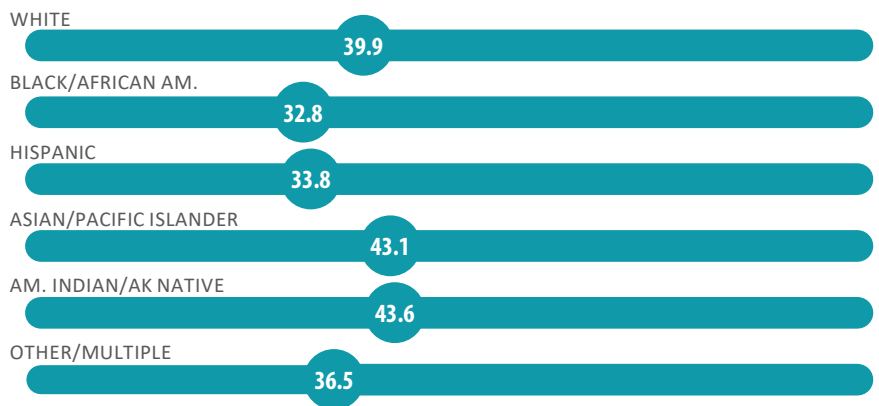
### Flu Vaccination Rates by Age



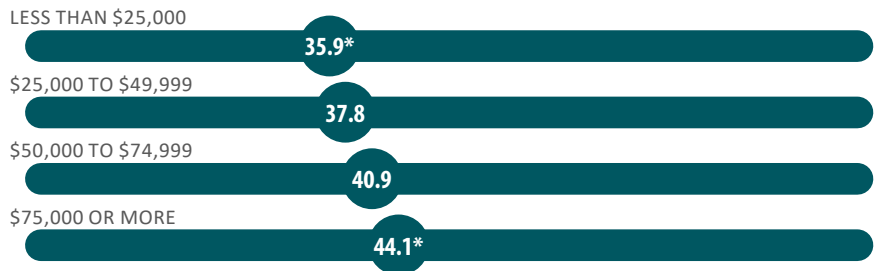
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

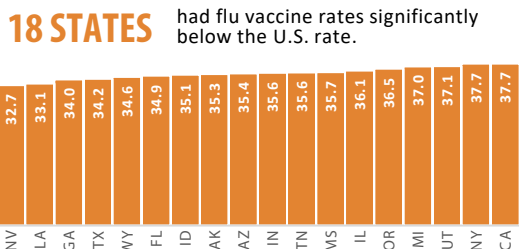


### Flu Vaccination Rates by Household Income

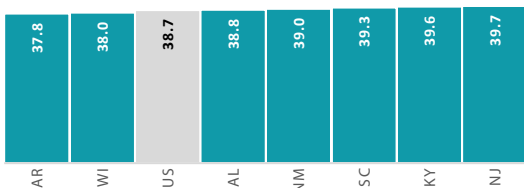


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



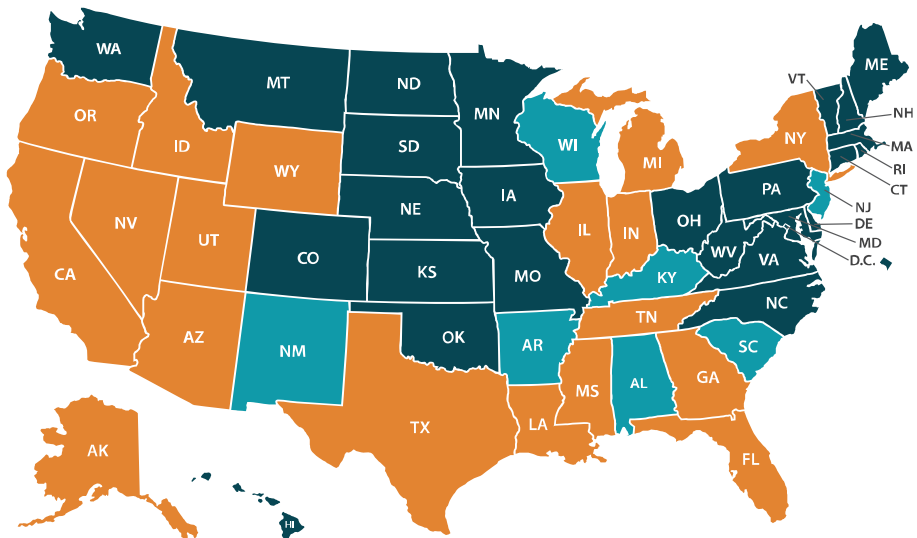
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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Montana	Montana			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	39.7		1.0*	38.7	
<b>Age</b>					
18-39	28.9	-10.9*	0.3	28.5	-10.2*
40-64	37.6	-2.1*	0.4	37.2	-1.5*
65+	59.4	19.7*	0.0	59.4	20.7*
<b>Race/Ethnicity</b>					
White	39.9	0.2	-1.8*	41.7	3.0*
Black/African American	32.8	-6.9	0.1	32.8	-5.9*
Hispanic	33.8	-6.0	2.8	30.9	-7.7*
Asian/Pacific Islander	43.1	3.4	1.7	41.4	2.7*
American Indian/Alaska Native	43.6	3.9	9.7*	33.9	-4.8*
Other/multiple	36.5	-3.2	1.6	34.9	-3.8*
<b>Sex</b>					
Male	34.8	-4.9*	-0.6	35.4	-3.3*
Female	44.7	5.0*	2.9*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	36.7	-3.0*	1.3*	35.4	-3.3*
1+ chronic conditions	50.7	11.0*	1.5	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	15.2	-24.5*	-2.4	17.6	-21.1*
Insured	42.5	2.8*	0.9	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	21.0	-18.7*	0.9	20.1	-18.6*
Has personal doctor	46.8	7.1*	2.7*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	41.1		0.9	40.2	
Less than high school	33.3	-7.7*	-0.7	34.0	-6.1*
High school graduate	34.9	-6.2*	-0.7	35.6	-4.6*
Some college or associate's degree	40.4	-0.7	1.6	38.8	-1.4*
Bachelor's degree or higher	49.8	9.5*	1.9*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	35.9	-3.8*	1.2	34.8	-3.9*
\$25,000 to \$49,999	37.8	-1.9	1.3	36.5	-2.2*
\$50,000 to \$74,999	40.9	1.2	2.3	38.6	-0.1
\$75,000 or more	44.1	4.3*	1.3	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





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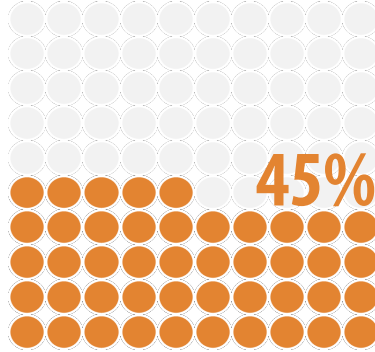
## North Carolina

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

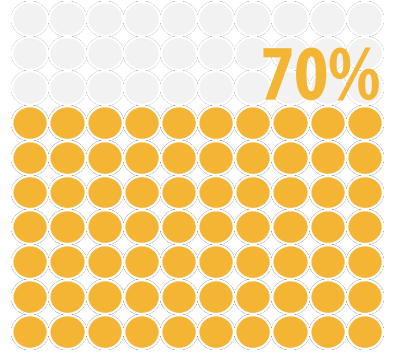
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

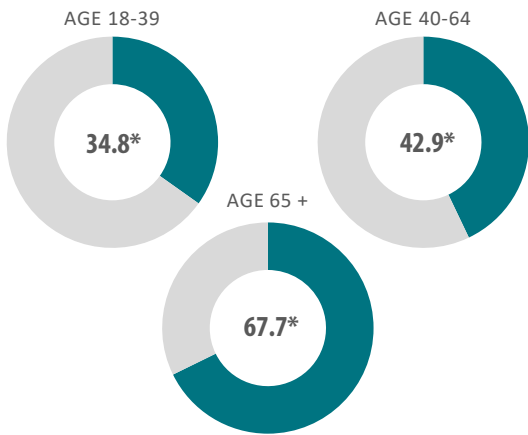
STATE RATE



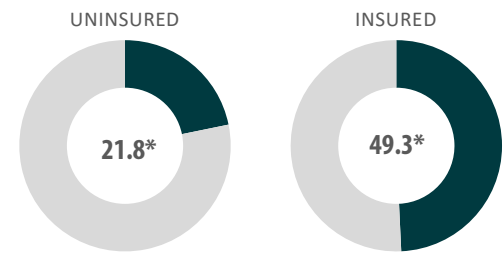
HERD IMMUNITY THRESHOLD



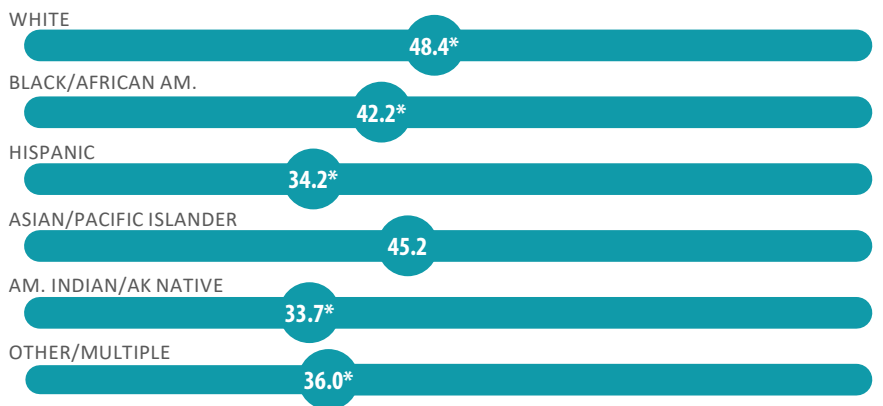
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

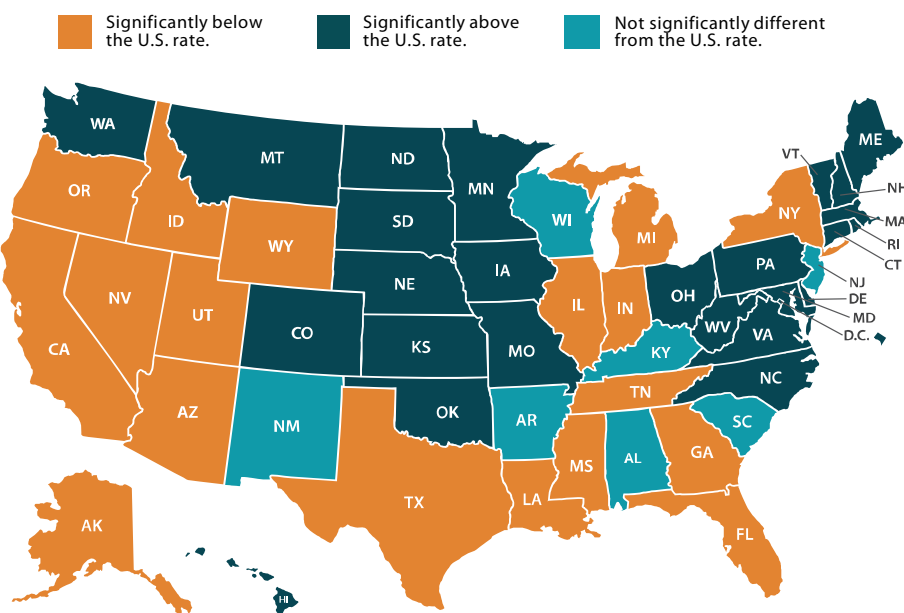
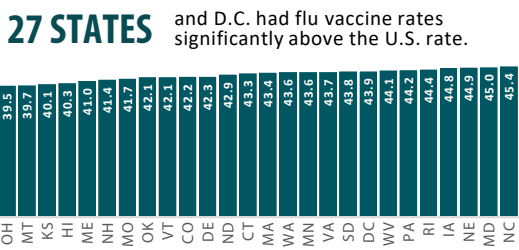
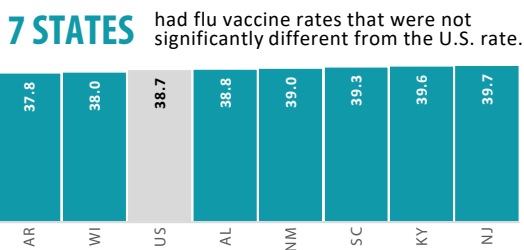
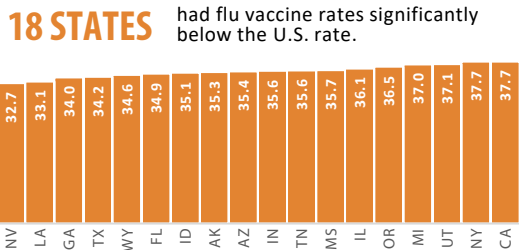


### Flu Vaccination Rates by Household Income



\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



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SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

North Carolina	North Carolina			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	45.4		6.7*	38.7	
<b>Age</b>					
18-39	34.8	-10.5*	6.3*	28.5	-10.2*
40-64	42.9	-2.4*	5.7*	37.2	-1.5*
65+	67.7	22.4*	8.4*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	48.4	3.0*	6.7*	41.7	3.0*
Black/African American	42.2	-3.2*	9.4*	32.8	-5.9*
Hispanic	34.2	-11.2*	3.2	30.9	-7.7*
Asian/Pacific Islander	45.2	-0.1	3.9	41.4	2.7*
American Indian/Alaska Native	33.7	-11.6*	-0.2	33.9	-4.8*
Other/multiple	36.0	-9.4*	1.1	34.9	-3.8*
<b>Sex</b>					
Male	41.8	-3.5*	6.5*	35.4	-3.3*
Female	48.5	3.1*	6.7*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	41.6	-3.8*	6.1*	35.4	-3.3*
1+ chronic conditions	56.6	11.3*	7.5*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	21.8	-23.6*	4.2*	17.6	-21.1*
Insured	49.3	3.9*	7.6*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	23.8	-21.6*	3.7*	20.1	-18.6*
Has personal doctor	51.4	6.0*	7.3*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	46.8		6.7*	40.2	
Less than high school	43.3	-3.6*	9.2*	34.0	-6.1*
High school graduate	42.9	-3.9*	7.3*	35.6	-4.6*
Some college or associate's degree	45.1	-1.7*	6.3*	38.8	-1.4*
Bachelor's degree or higher	53.7	8.7*	5.8*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	42.7	-2.7*	7.9*	34.8	-3.9*
\$25,000 to \$49,999	42.1	-3.2*	5.6*	36.5	-2.2*
\$50,000 to \$74,999	43.9	-1.4	5.3*	38.6	-0.1
\$75,000 or more	50.2	4.9*	7.4*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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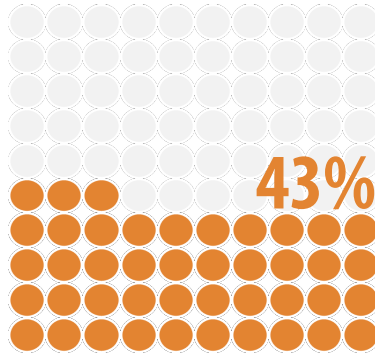
## North Dakota

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

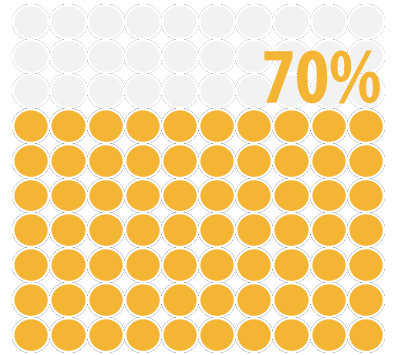
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

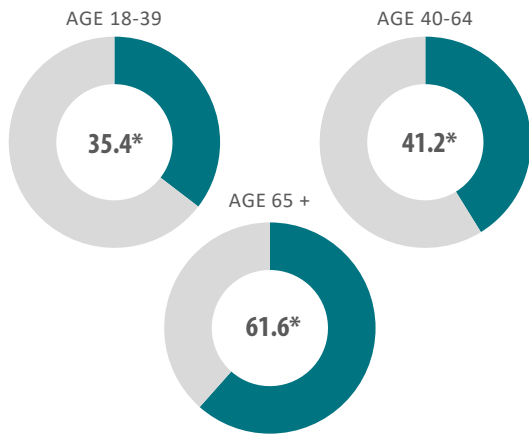
STATE RATE



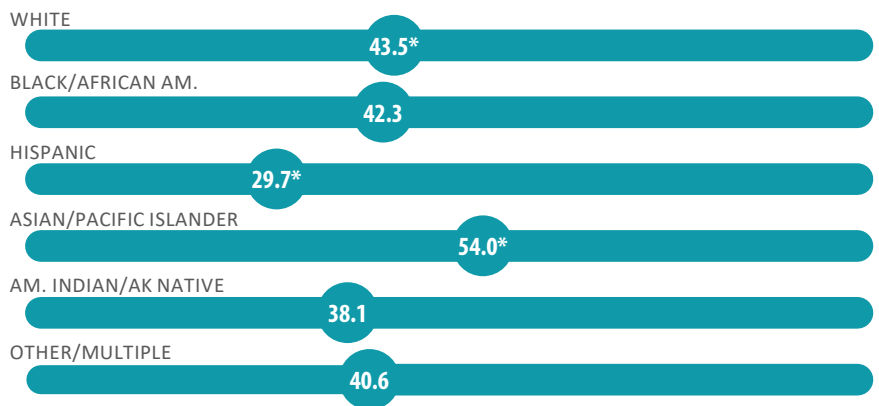
HERD IMMUNITY THRESHOLD



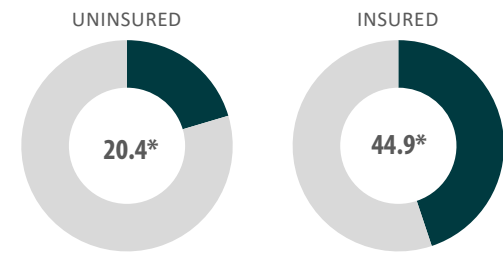
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

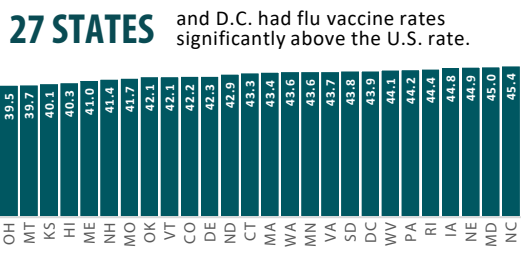
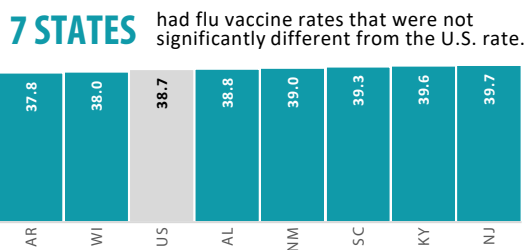
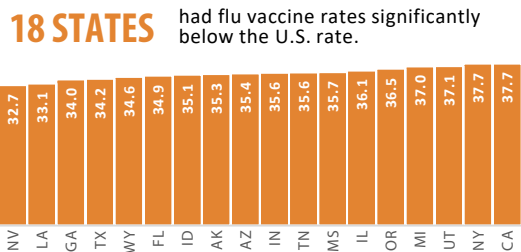


### Flu Vaccination Rates by Household Income

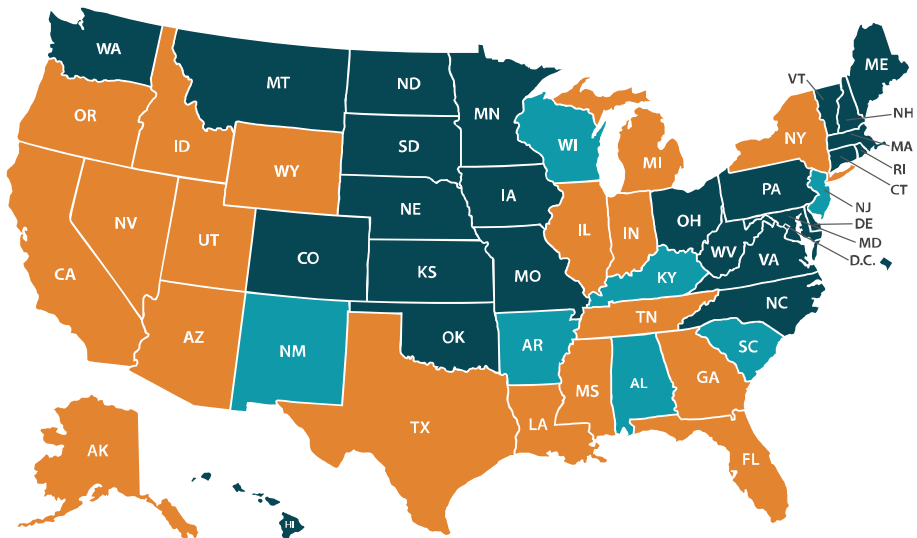


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

North Dakota	North Dakota		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	42.9		4.2*	38.7	
<b>Age</b>					
18-39	35.4	-7.5*	6.9*	28.5	-10.2*
40-64	41.2	-1.7*	4.0*	37.2	-1.5*
65+	61.6	18.6*	2.2*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	43.5	0.6*	1.8*	41.7	3.0*
Black/African American	42.3	-0.6	9.5*	32.8	-5.9*
Hispanic	29.7	-13.2*	-1.2	30.9	-7.7*
Asian/Pacific Islander	54.0	11.1*	12.6*	41.4	2.7*
American Indian/Alaska Native	38.1	-4.8	4.2	33.9	-4.8*
Other/multiple	40.6	-2.3	5.8	34.9	-3.8*
<b>Sex</b>					
Male	37.7	-5.2*	2.3*	35.4	-3.3*
Female	48.3	5.4*	6.5*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	40.0	-2.9*	4.6*	35.4	-3.3*
1+ chronic conditions	53.6	10.7*	4.4*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	20.4	-22.5*	2.8	17.6	-21.1*
Insured	44.9	2.0*	3.3*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	23.4	-19.5*	3.3*	20.1	-18.6*
Has personal doctor	50.7	7.8*	6.6*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	43.8		3.7*	40.2	
Less than high school	35.4	-8.5*	1.3	34.0	-6.1*
High school graduate	36.7	-7.1*	1.1	35.6	-4.6*
Some college or associate's degree	42.9	-0.9	4.1*	38.8	-1.4*
Bachelor's degree or higher	53.3	10.4*	5.3*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	40.7	-2.3*	5.9*	34.8	-3.9*
\$25,000 to \$49,999	42.4	-0.5	5.9*	36.5	-2.2*
\$50,000 to \$74,999	41.8	-1.1	3.2*	38.6	-0.1
\$75,000 or more	44.3	1.4*	1.5	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

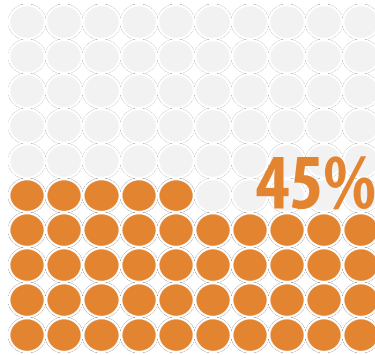
## Nebraska

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

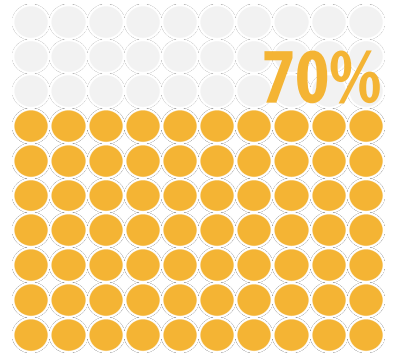
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

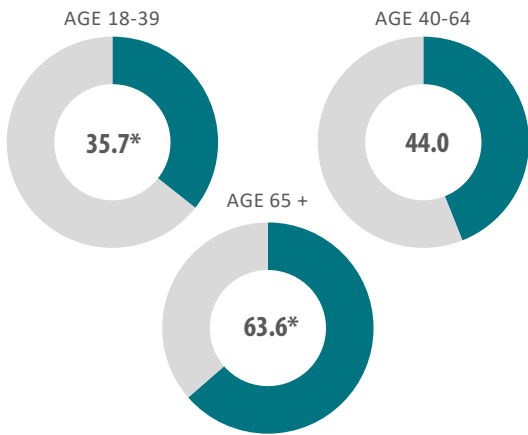
STATE RATE



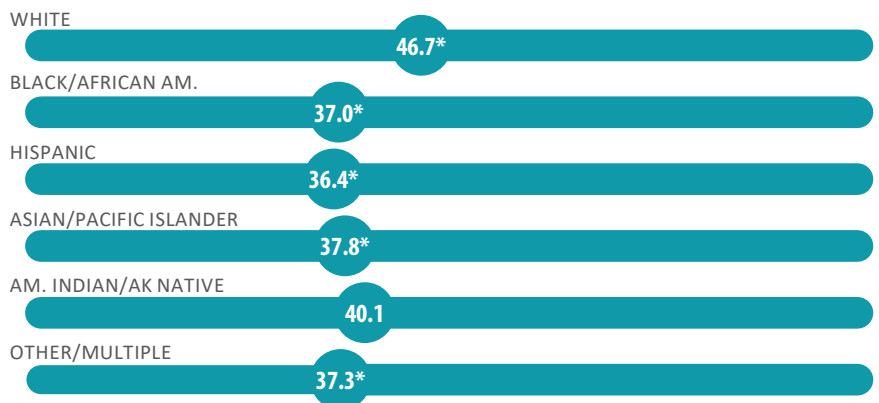
HERD IMMUNITY THRESHOLD



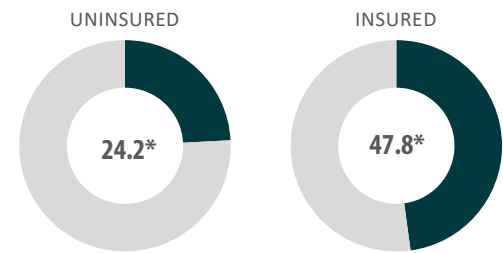
### Flu Vaccination Rates by Age



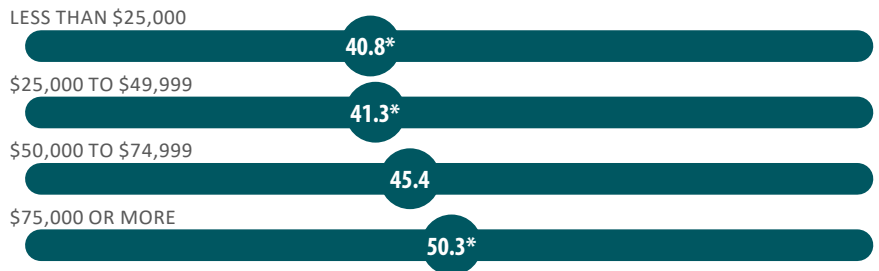
### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

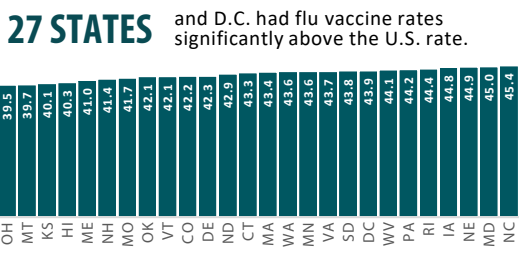
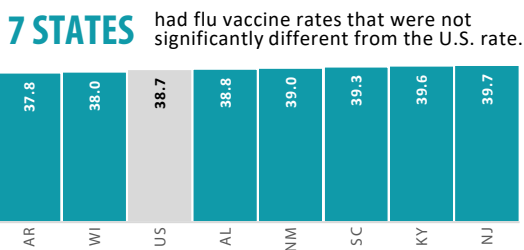
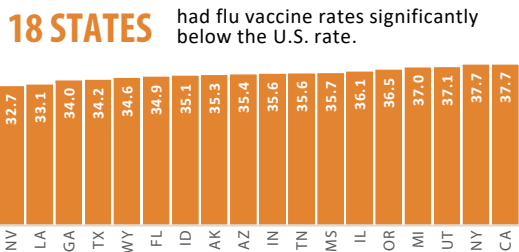


### Flu Vaccination Rates by Household Income

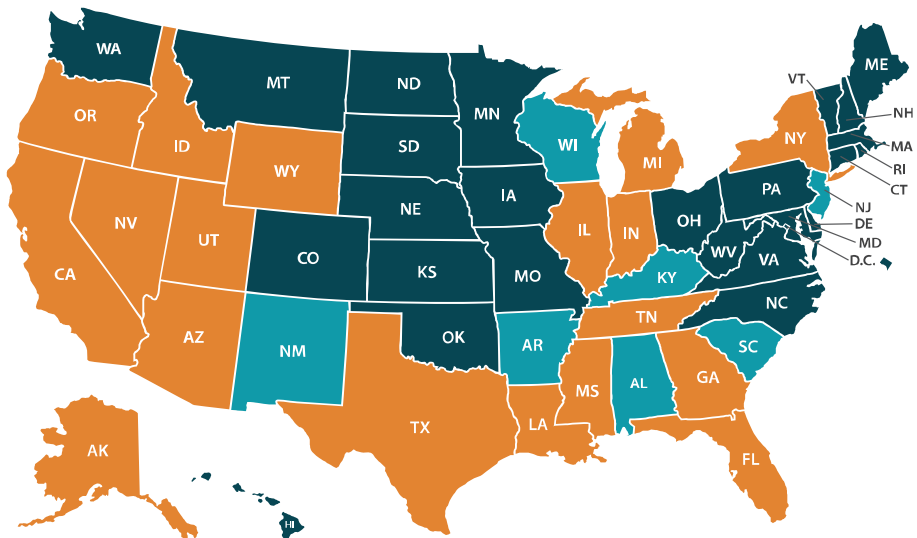


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Nebraska	Nebraska		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	44.9		6.3*	38.7	
<b>Age</b>					
18-39	35.7	-9.3*	7.1*	28.5	-10.2*
40-64	44.0	-1.0	6.8*	37.2	-1.5*
65+	63.6	18.6*	4.2*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	46.7	1.8*	5.0*	41.7	3.0*
Black/African American	37.0	-7.9*	4.3	32.8	-5.9*
Hispanic	36.4	-8.5*	5.5*	30.9	-7.7*
Asian/Pacific Islander	37.8	-7.2*	-3.6	41.4	2.7*
American Indian/Alaska Native	40.1	-4.8	6.2	33.9	-4.8*
Other/multiple	37.3	-7.7*	2.4	34.9	-3.8*
<b>Sex</b>					
Male	40.1	-4.9*	4.7*	35.4	-3.3*
Female	49.7	4.8*	7.9*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	42.3	-2.6*	6.9*	35.4	-3.3*
1+ chronic conditions	54.2	9.2*	5.0*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	24.2	-20.8*	6.6*	17.6	-21.1*
Insured	47.8	2.9*	6.2*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	25.6	-19.4*	5.5*	20.1	-18.6*
Has personal doctor	50.0	5.1*	5.9*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	46.8		6.6*	40.2	
Less than high school	38.6	-8.2*	4.5*	34.0	-6.1*
High school graduate	44.0	-2.8*	8.4*	35.6	-4.6*
Some college or associate's degree	43.9	-2.9*	5.2*	38.8	-1.4*
Bachelor's degree or higher	54.9	10.9*	6.9*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	40.8	-4.2*	6.0*	34.8	-3.9*
\$25,000 to \$49,999	41.3	-3.6*	4.8*	36.5	-2.2*
\$50,000 to \$74,999	45.4	0.5	6.8*	38.6	-0.1
\$75,000 or more	50.3	5.4*	7.5*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

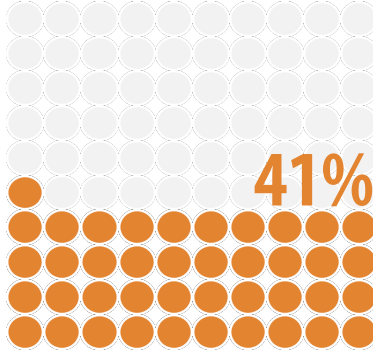
## New Hampshire

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

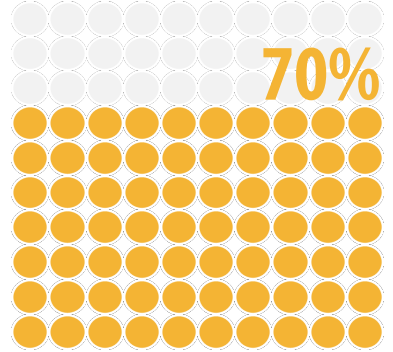
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

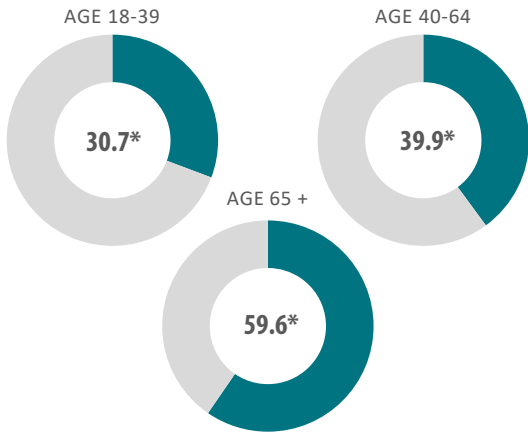
STATE RATE



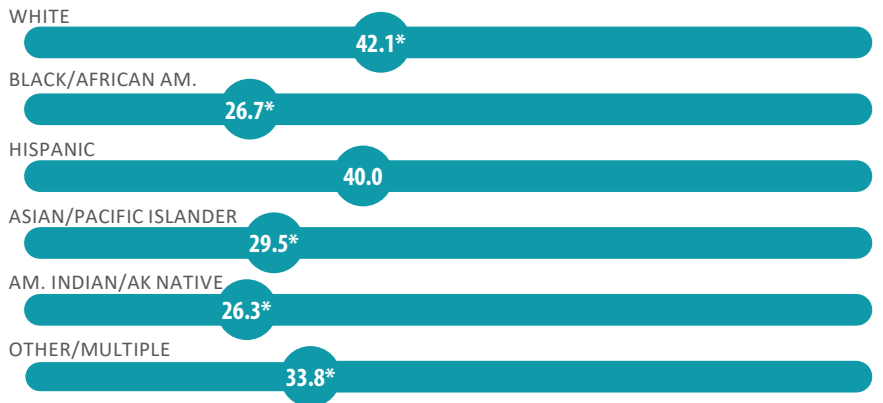
HERD IMMUNITY THRESHOLD



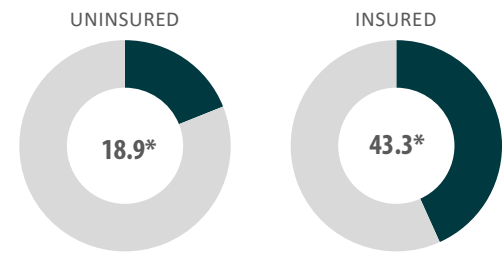
### Flu Vaccination Rates by Age



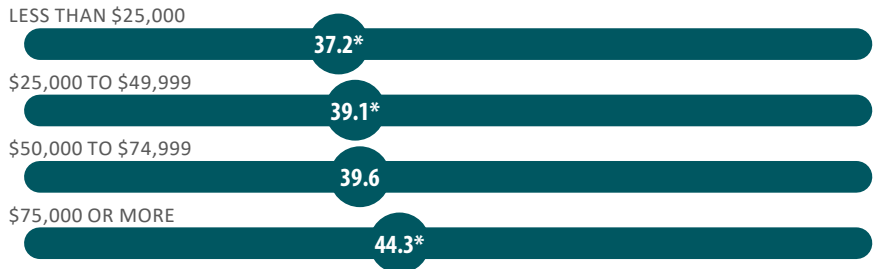
### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

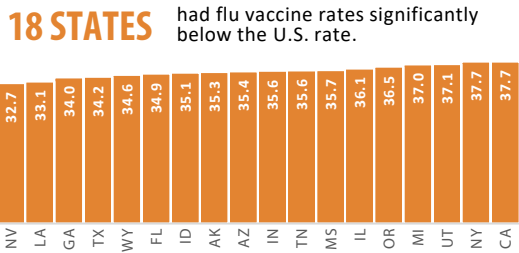


### Flu Vaccination Rates by Household Income

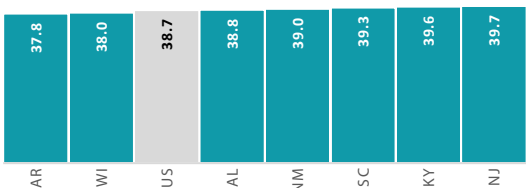


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



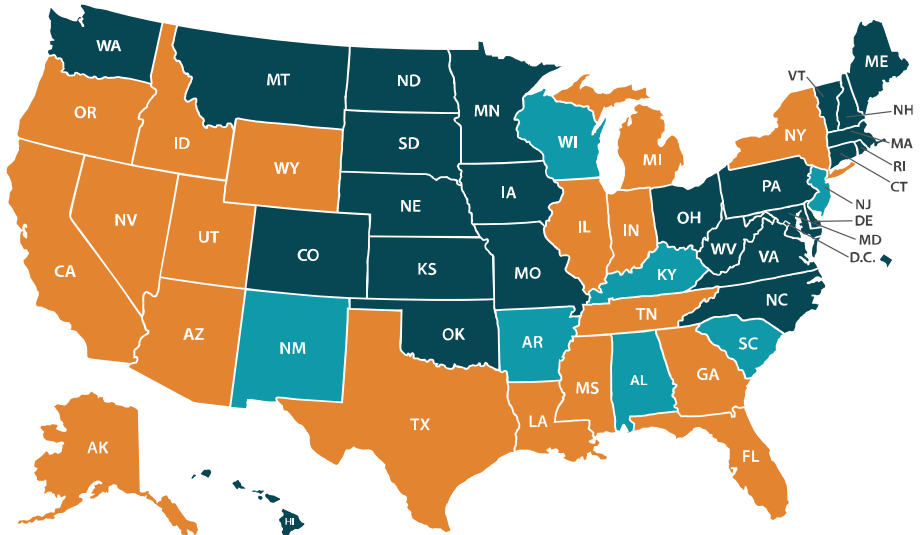
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

New Hampshire	New Hampshire			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	41.4		2.7*	38.7	
<b>Age</b>					
18-39	30.7	-10.6*	2.2	28.5	-10.2*
40-64	39.9	-1.5*	2.7*	37.2	-1.5*
65+	59.6	18.2*	0.2	59.4	20.7*
<b>Race/Ethnicity</b>					
White	42.1	0.7*	0.4	41.7	3.0*
Black/African American	26.7	-14.7*	-6.1	32.8	-5.9*
Hispanic	40.0	-1.4	9.1	30.9	-7.7*
Asian/Pacific Islander	29.5	-11.8*	-11.8*	41.4	2.7*
American Indian/Alaska Native	26.3	-15.1*	-7.6	33.9	-4.8*
Other/multiple	33.8	-7.5*	-1.0	34.9	-3.8*
<b>Sex</b>					
Male	39.3	-2.1*	3.9*	35.4	-3.3*
Female	43.4	2.0*	1.6*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	38.8	-2.6*	3.4*	35.4	-3.3*
1+ chronic conditions	49.5	8.1*	0.4	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	18.9	-22.4*	1.4	17.6	-21.1*
Insured	43.3	1.9*	1.6*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	20.5	-20.8*	0.4	20.1	-18.6*
Has personal doctor	44.4	3.0*	0.3	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	42.5		2.3*	40.2	
Less than high school	33.5	-9.0*	-0.6	34.0	-6.1*
High school graduate	34.1	-8.4*	-1.5	35.6	-4.6*
Some college or associate's degree	42.1	-0.4	3.3*	38.8	-1.4*
Bachelor's degree or higher	51.0	8.9*	3.1*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	37.2	-4.2*	2.4*	34.8	-3.9*
\$25,000 to \$49,999	39.1	-2.3*	2.6*	36.5	-2.2*
\$50,000 to \$74,999	39.6	-1.7	1.0	38.6	-0.1
\$75,000 or more	44.3	2.9*	1.5	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





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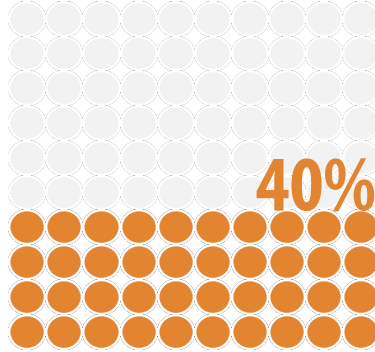
## New Jersey

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

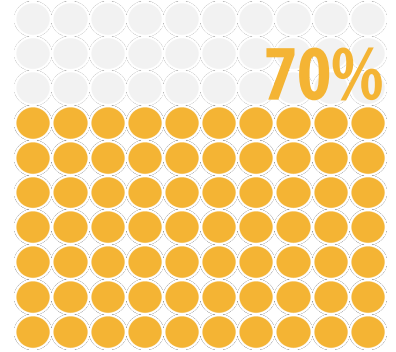
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

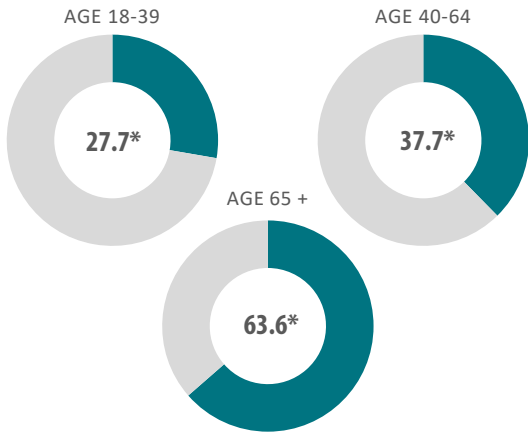
STATE RATE



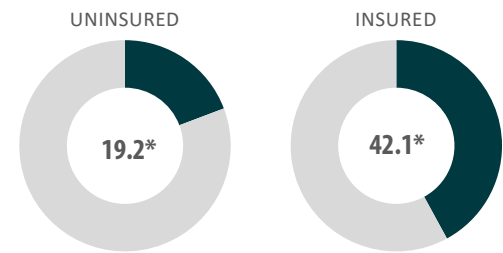
HERD IMMUNITY THRESHOLD



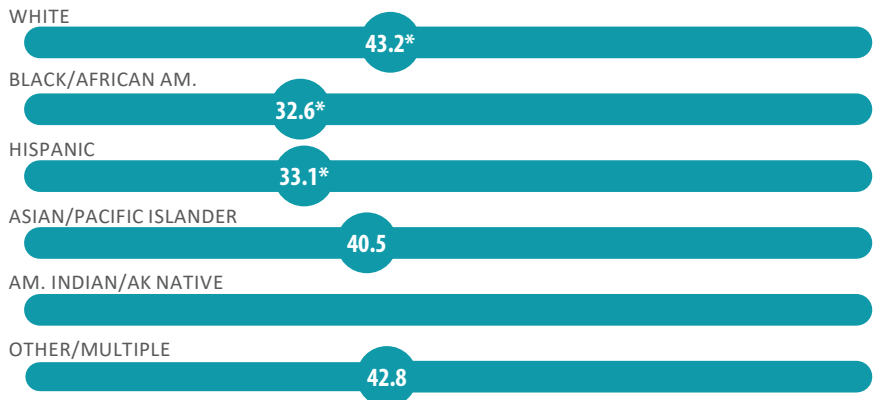
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

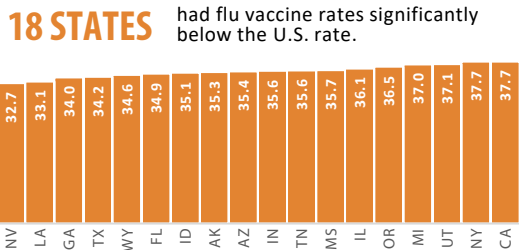


### Flu Vaccination Rates by Household Income

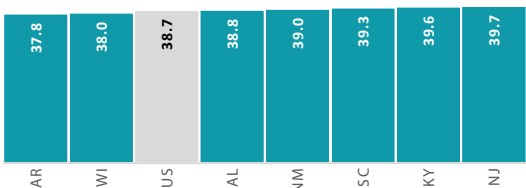


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



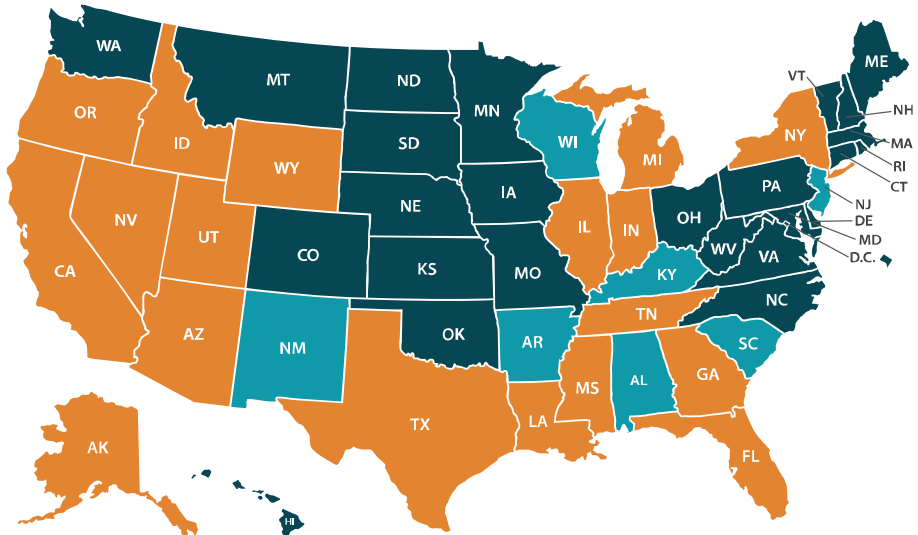
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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

New Jersey	New Jersey			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	39.7		1.0	38.7	
<b>Age</b>					
18-39	27.7	-12.0*	-0.8	28.5	-10.2*
40-64	37.7	-2.0*	0.5	37.2	-1.5*
65+	63.6	23.9*	4.2*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	43.2	3.5*	1.5	41.7	3.0*
Black/African American	32.6	-7.0*	-0.1	32.8	-5.9*
Hispanic	33.1	-6.6*	2.1	30.9	-7.7*
Asian/Pacific Islander	40.5	0.8	-0.9	41.4	2.7*
American Indian/Alaska Native	-	-	-	33.9	-4.8*
Other/multiple	42.8	3.1	8.0	34.9	-3.8*
<b>Sex</b>					
Male	37.6	-2.1*	2.3	35.4	-3.3*
Female	41.5	1.9*	-0.3	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	36.0	-3.7*	0.6	35.4	-3.3*
1+ chronic conditions	52.0	12.3*	2.8	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	19.2	-20.4*	1.7	17.6	-21.1*
Insured	42.1	2.4*	0.4	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	24.8	-14.9*	4.6*	20.1	-18.6*
Has personal doctor	43.5	3.8*	-0.6	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	41.4		1.2	40.2	
Less than high school	38.4	-2.9	4.4	34.0	-6.1*
High school graduate	37.8	-3.6*	2.2	35.6	-4.6*
Some college or associate's degree	41.5	0.1	2.7	38.8	-1.4*
Bachelor's degree or higher	44.8	3.3*	-3.2*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	37.2	-2.5*	2.4*	34.8	-3.9*
\$25,000 to \$49,999	38.1	-1.6	1.6	36.5	-2.2*
\$50,000 to \$74,999	36.3	-3.3*	-2.2	38.6	-0.1
\$75,000 or more	42.5	2.8*	-0.4	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

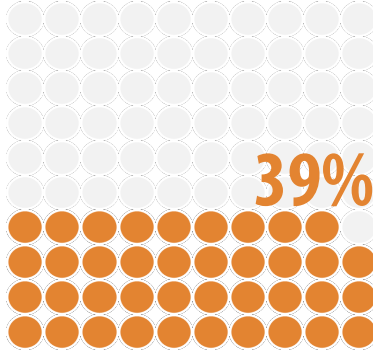
## New Mexico

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

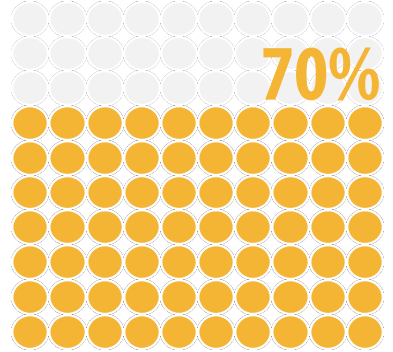
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

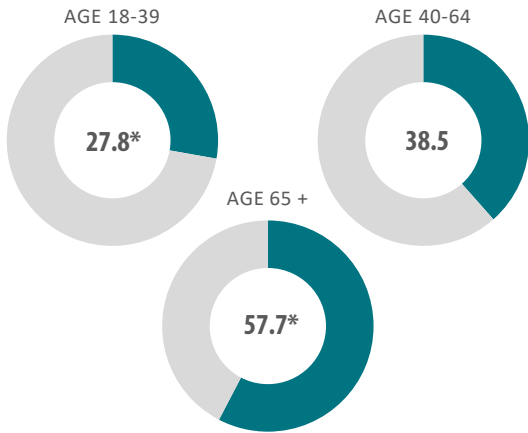
STATE RATE



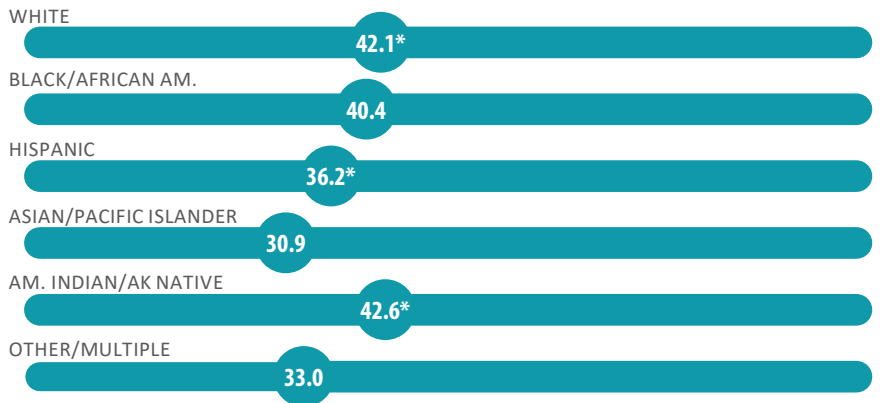
HERD IMMUNITY THRESHOLD



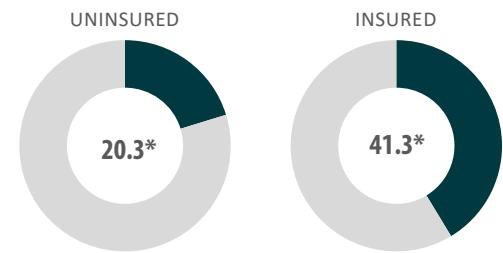
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

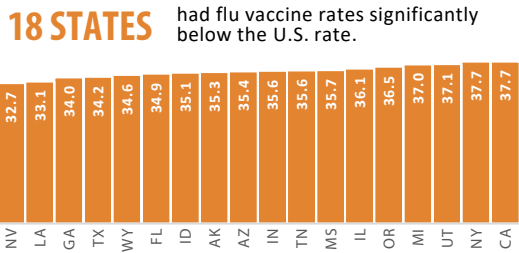


### Flu Vaccination Rates by Household Income

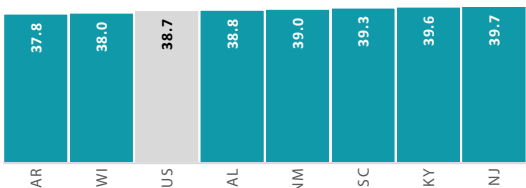


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



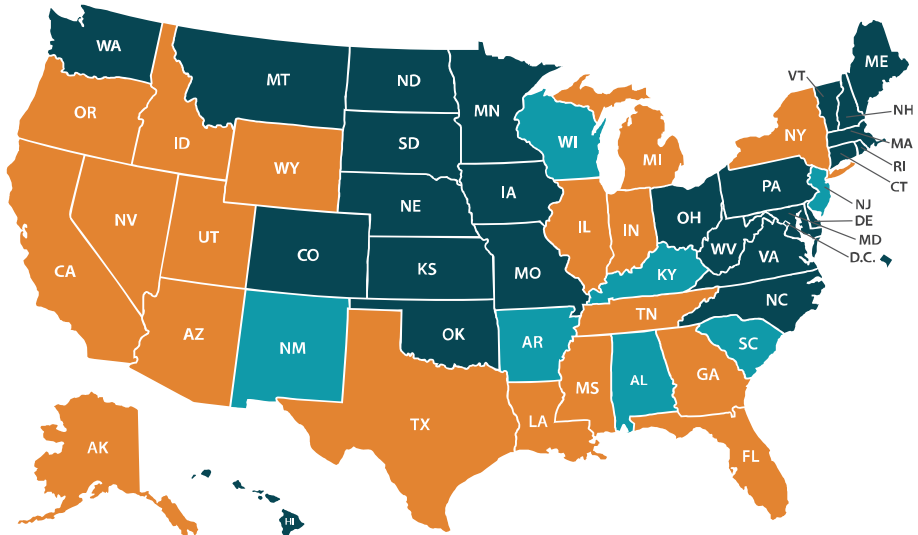
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

New Mexico	New Mexico			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	39.0		0.3	38.7	
<b>Age</b>					
18-39	27.8	-11.2*	-0.7	28.5	-10.2*
40-64	38.5	-0.5	1.3	37.2	-1.5*
65+	57.7	18.7*	-1.7	59.4	20.7*
<b>Race/Ethnicity</b>					
White	42.1	3.2*	0.4	41.7	3.0*
Black/African American	40.4	1.4	7.6	32.8	-5.9*
Hispanic	36.2	-2.7*	5.3*	30.9	-7.7*
Asian/Pacific Islander	30.9	-8.0	-10.4*	41.4	2.7*
American Indian/Alaska Native	42.6	3.7*	8.7*	33.9	-4.8*
Other/multiple	33.0	-5.9	-1.8	34.9	-3.8*
<b>Sex</b>					
Male	35.1	-3.9*	-0.3	35.4	-3.3*
Female	42.7	3.7*	0.9	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	35.4	-3.5*	0.0	35.4	-3.3*
1+ chronic conditions	49.9	11.0*	0.8	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	20.3	-18.7*	2.7	17.6	-21.1*
Insured	41.3	2.4*	-0.3	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	23.2	-15.8*	3.1*	20.1	-18.6*
Has personal doctor	45.6	6.6*	1.5*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	40.5		0.4	40.2	
Less than high school	38.2	-2.3	4.2*	34.0	-6.1*
High school graduate	36.7	-3.8*	1.2	35.6	-4.6*
Some college or associate's degree	37.3	-3.3*	-1.5	38.8	-1.4*
Bachelor's degree or higher	49.3	12.1*	1.4	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	37.0	-2.0*	2.2*	34.8	-3.9*
\$25,000 to \$49,999	35.5	-3.5*	-1.0	36.5	-2.2*
\$50,000 to \$74,999	40.1	1.1	1.5	38.6	-0.1
\$75,000 or more	44.2	5.2*	1.3	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

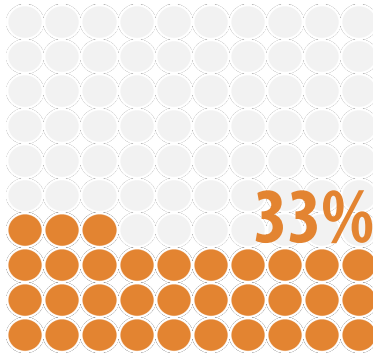
## Nevada

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

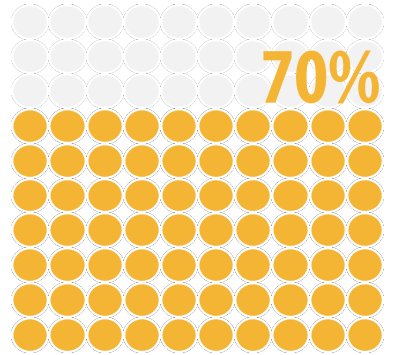
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

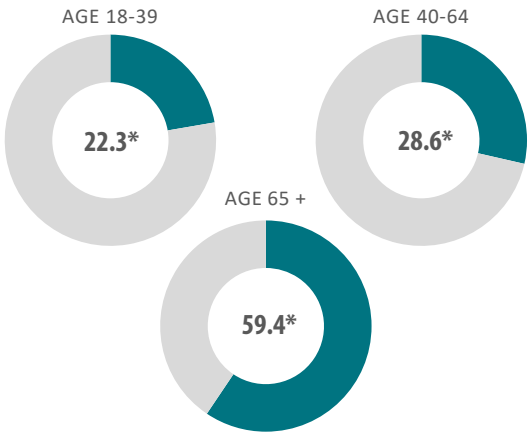
STATE RATE



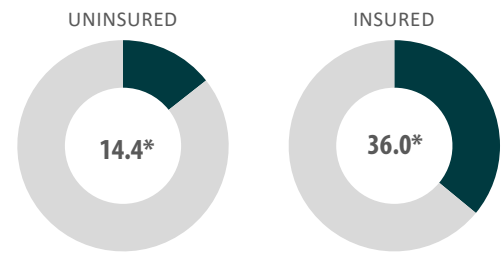
HERD IMMUNITY THRESHOLD



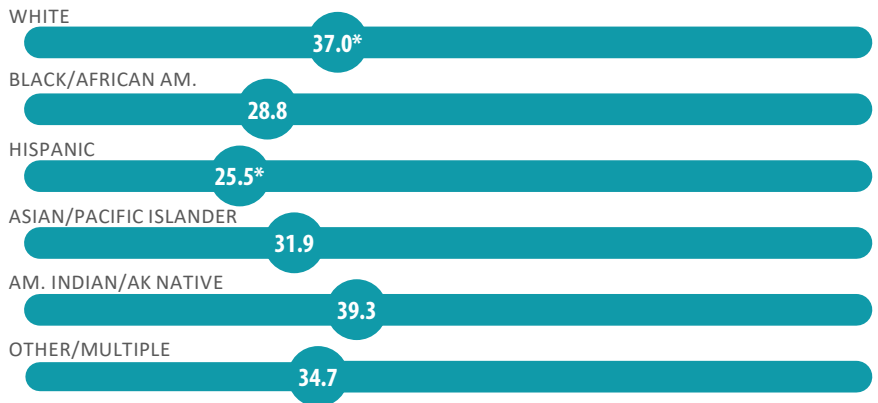
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity



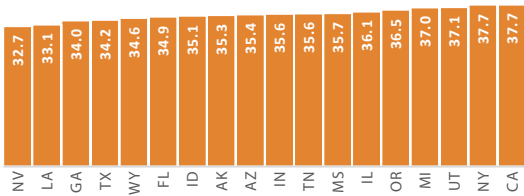
### Flu Vaccination Rates by Household Income



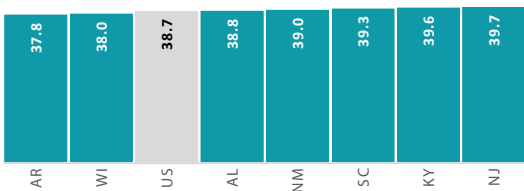
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates

**18 STATES** had flu vaccine rates significantly below the U.S. rate.



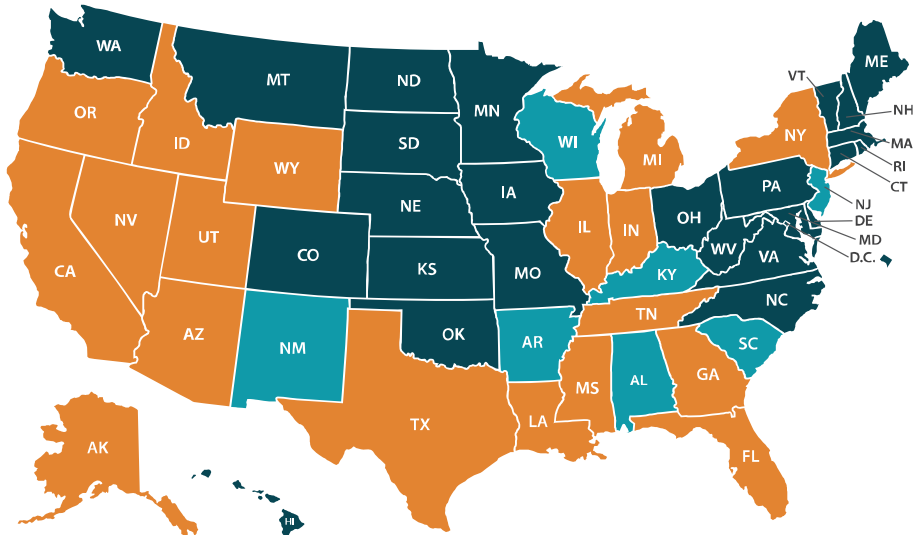
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Nevada	Nevada		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	32.7		-6.0*	38.7	
<b>Age</b>					
18-39	22.3	-10.4*	-6.2*	28.5	-10.2*
40-64	28.6	-4.1*	-8.6*	37.2	-1.5*
65+	59.4	26.8*	0.0	59.4	20.7*
<b>Race/Ethnicity</b>					
White	37.0	4.4*	-4.7*	41.7	3.0*
Black/African American	28.8	-3.9	-4.0	32.8	-5.9*
Hispanic	25.5	-7.2*	-5.4*	30.9	-7.7*
Asian/Pacific Islander	31.9	-0.7	-9.5*	41.4	2.7*
American Indian/Alaska Native	39.3	6.6	5.4	33.9	-4.8*
Other/multiple	34.7	2.1	-0.1	34.9	-3.8*
<b>Sex</b>					
Male	30.3	-2.4*	-5.1*	35.4	-3.3*
Female	34.9	2.2*	-6.9*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	28.6	-4.1*	-6.8*	35.4	-3.3*
1+ chronic conditions	45.3	12.7*	-3.8*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	14.4	-18.3*	-3.2*	17.6	-21.1*
Insured	36.0	3.3*	-5.6*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	17.5	-15.1*	-2.6*	20.1	-18.6*
Has personal doctor	39.9	7.2*	-4.2*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	34.0		-6.2*	40.2	
Less than high school	25.7	-8.3*	-8.4*	34.0	-6.1*
High school graduate	30.5	-3.5*	-5.1*	35.6	-4.6*
Some college or associate's degree	35.3	1.3	-3.4*	38.8	-1.4*
Bachelor's degree or higher	41.4	6.0*	-6.6*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	29.7	-2.9*	-5.0*	34.8	-3.9*
\$25,000 to \$49,999	33.4	0.8	-3.1*	36.5	-2.2*
\$50,000 to \$74,999	33.2	0.6	-5.4*	38.6	-0.1
\$75,000 or more	35.5	2.8*	-7.4*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

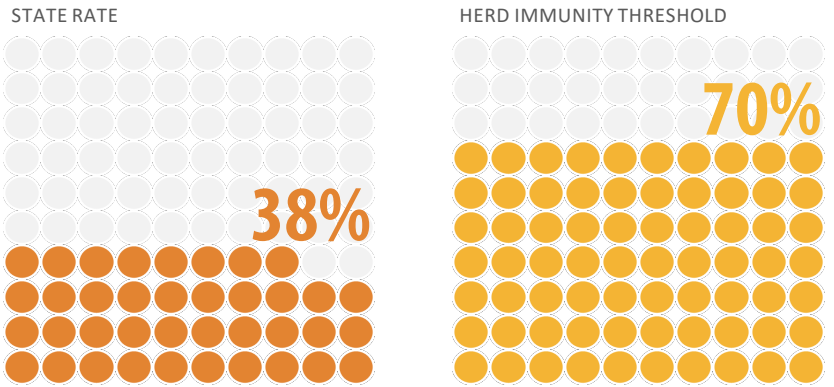
SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

## New York

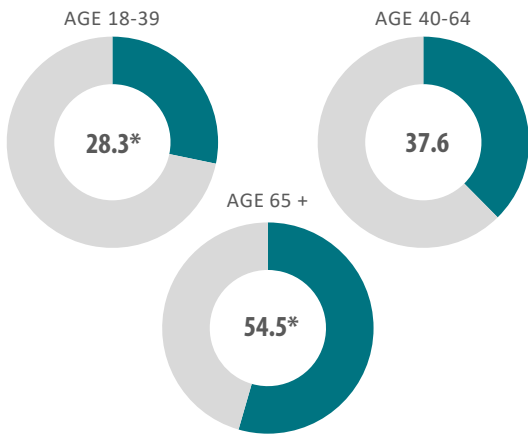
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Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

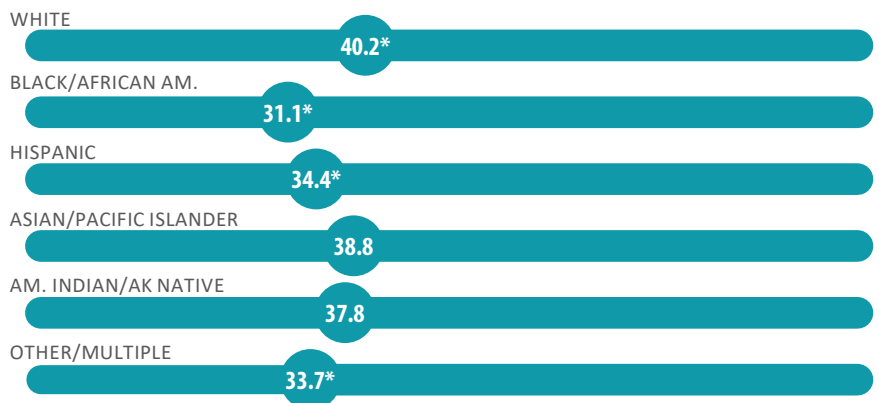
### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold



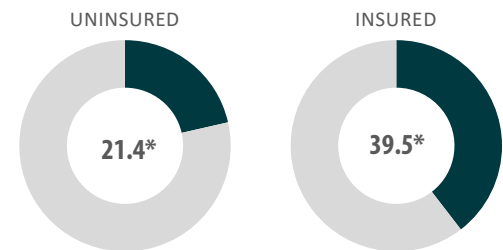
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

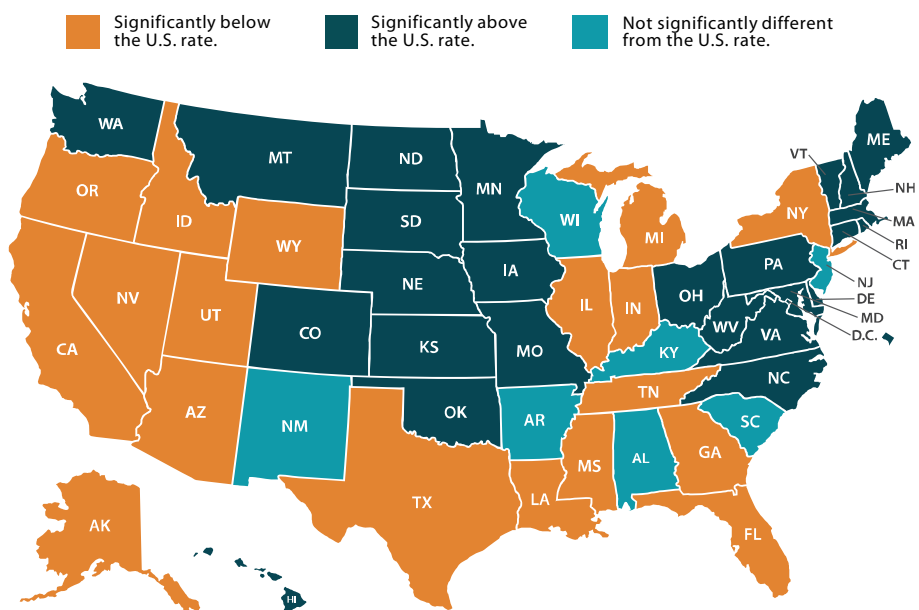
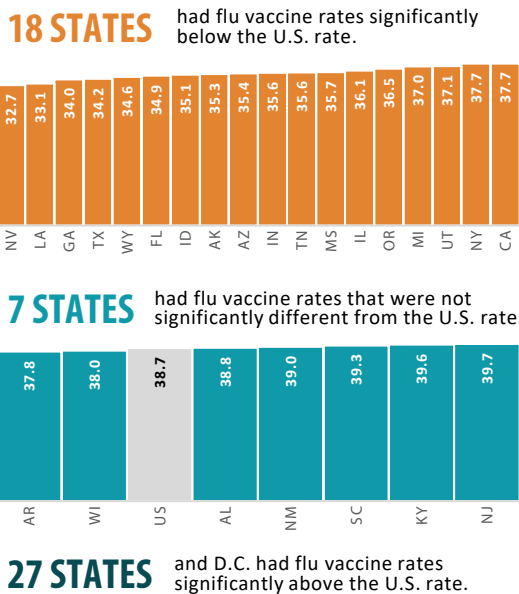


### Flu Vaccination Rates by Household Income



\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

New York	New York			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	37.7		-1.0*	38.7	
<b>Age</b>					
18-39	28.3	-9.4*	-0.3	28.5	-10.2*
40-64	37.6	-0.1	0.4	37.2	-1.5*
65+	54.5	16.8*	-4.9*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	40.2	2.5*	-1.5*	41.7	3.0*
Black/African American	31.1	-6.6*	-1.7	32.8	-5.9*
Hispanic	34.4	-3.3*	3.4*	30.9	-7.7*
Asian/Pacific Islander	38.8	1.1	-2.6	41.4	2.7*
American Indian/Alaska Native	37.8	0.1	3.9	33.9	-4.8*
Other/multiple	33.7	-4.0*	-1.2	34.9	-3.8*
<b>Sex</b>					
Male	34.1	-3.5*	-1.2*	35.4	-3.3*
Female	40.9	3.2*	-0.9	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	34.6	-3.1*	-0.8*	35.4	-3.3*
1+ chronic conditions	47.4	9.8*	-1.7*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	21.4	-16.3*	3.8*	17.6	-21.1*
Insured	39.5	1.9*	-2.1*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	21.2	-16.5*	1.1	20.1	-18.6*
Has personal doctor	41.5	3.8*	-2.6*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	38.9		-1.3*	40.2	
Less than high school	36.1	-2.8*	2.1	34.0	-6.1*
High school graduate	35.3	-3.6*	-0.3	35.6	-4.6*
Some college or associate's degree	36.4	-2.5*	-2.4*	38.8	-1.4*
Bachelor's degree or higher	44.2	7.8*	-3.8*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	35.9	-1.7	1.2	34.8	-3.9*
\$25,000 to \$49,999	35.5	-2.2*	-1.0	36.5	-2.2*
\$50,000 to \$74,999	37.1	-0.6	-1.5	38.6	-0.1
\$75,000 or more	40.3	2.6*	-2.5*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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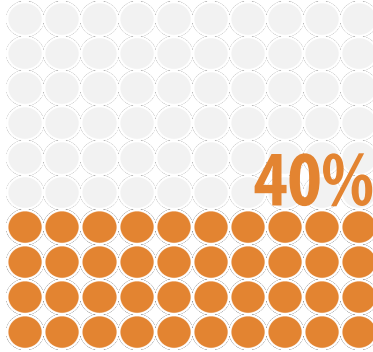
## Ohio

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

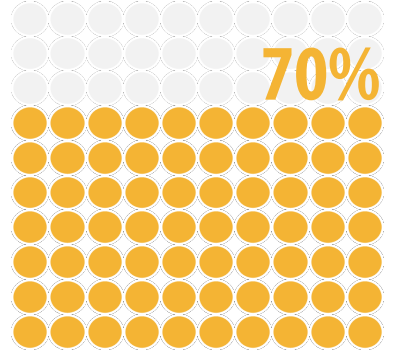
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

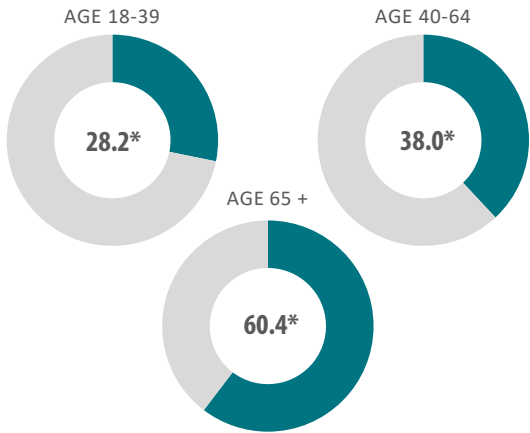
STATE RATE



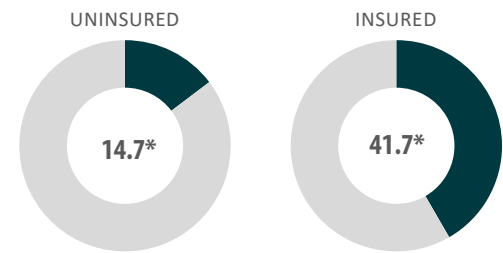
HERD IMMUNITY THRESHOLD



### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

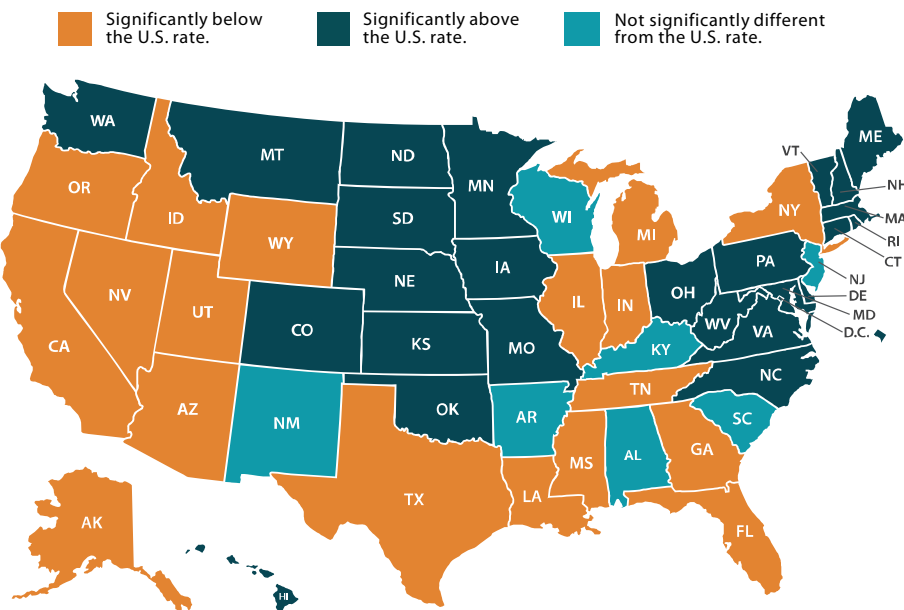
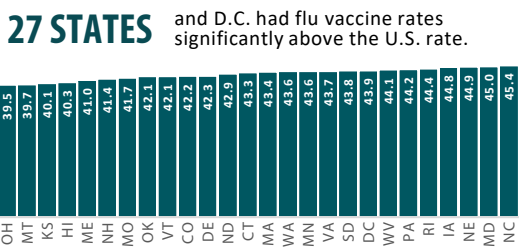
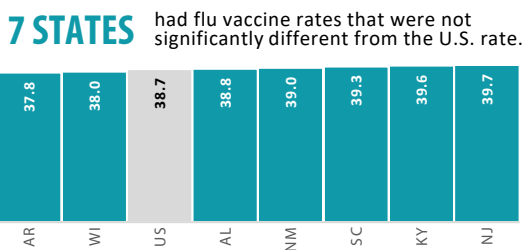
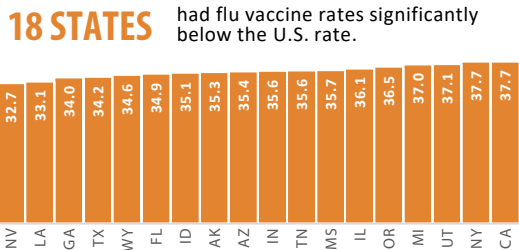


### Flu Vaccination Rates by Household Income



\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Ohio	Ohio			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	39.5		0.8*	38.7	
<b>Age</b>					
18-39	28.2	-11.3*	-0.3	28.5	-10.2*
40-64	38.0	-1.5*	0.9	37.2	-1.5*
65+	60.4	20.8*	1.0	59.4	20.7*
<b>Race/Ethnicity</b>					
White	40.7	1.2*	-1.0*	41.7	3.0*
Black/African American	34.8	-4.7*	2.1	32.8	-5.9*
Hispanic	31.5	-8.0*	0.6	30.9	-7.7*
Asian/Pacific Islander	40.0	0.5	-1.4	41.4	2.7*
American Indian/Alaska Native	34.8	-4.8	0.9	33.9	-4.8*
Other/multiple	31.3	-8.2*	-3.5	34.9	-3.8*
<b>Sex</b>					
Male	35.6	-3.9*	0.2	35.4	-3.3*
Female	43.1	3.6*	1.3*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	35.6	-3.9*	0.2	35.4	-3.3*
1+ chronic conditions	50.7	11.2*	1.6*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	14.7	-24.8*	-2.9*	17.6	-21.1*
Insured	41.7	2.1*	0.0	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	18.3	-21.2*	-1.8*	20.1	-18.6*
Has personal doctor	44.6	5.1*	0.5	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	41.2		1.0*	40.2	
Less than high school	34.3	-6.9*	0.3	34.0	-6.1*
High school graduate	37.1	-4.1*	1.5*	35.6	-4.6*
Some college or associate's degree	40.3	-0.8	1.6*	38.8	-1.4*
Bachelor's degree or higher	49.6	9.3*	1.7*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	37.1	-2.5*	2.3*	34.8	-3.9*
\$25,000 to \$49,999	37.8	-1.7	1.3	36.5	-2.2*
\$50,000 to \$74,999	39.3	-0.3	0.7	38.6	-0.1
\$75,000 or more	42.6	3.1*	-0.2	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

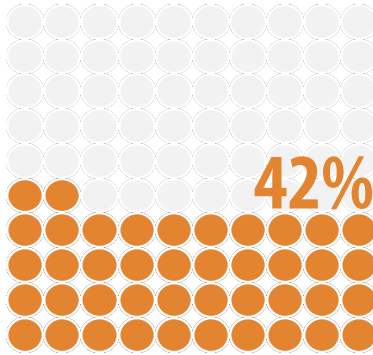
## Oklahoma

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

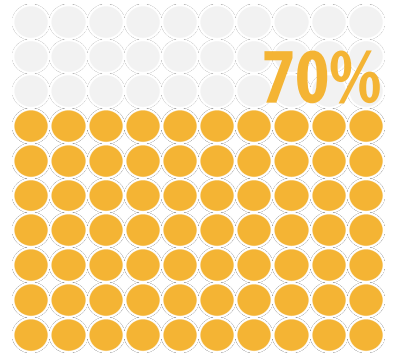
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

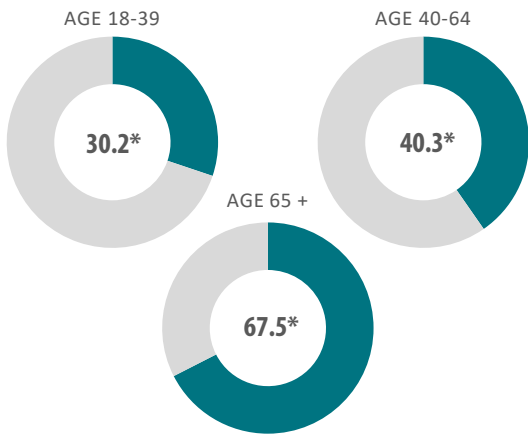
STATE RATE



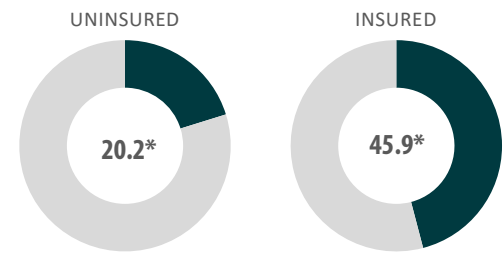
HERD IMMUNITY THRESHOLD



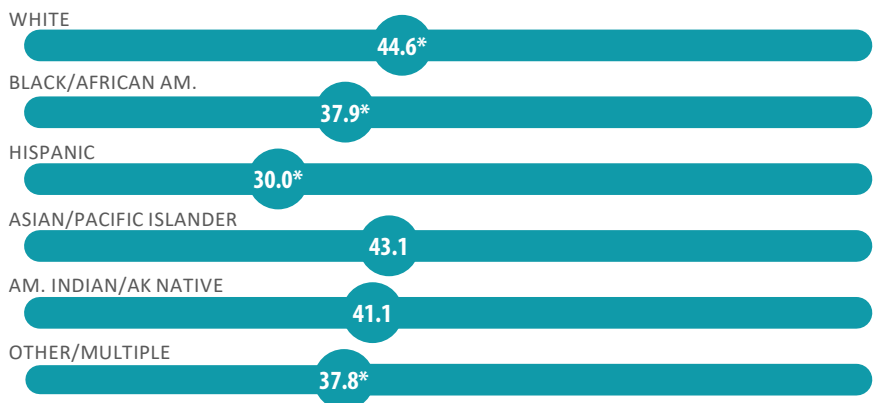
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

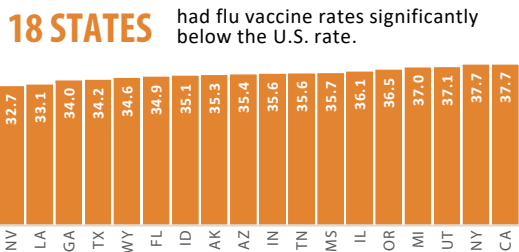


### Flu Vaccination Rates by Household Income

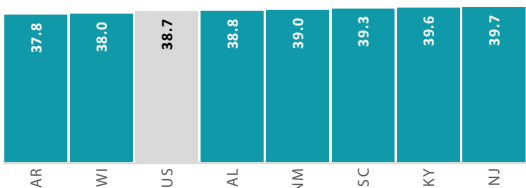


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



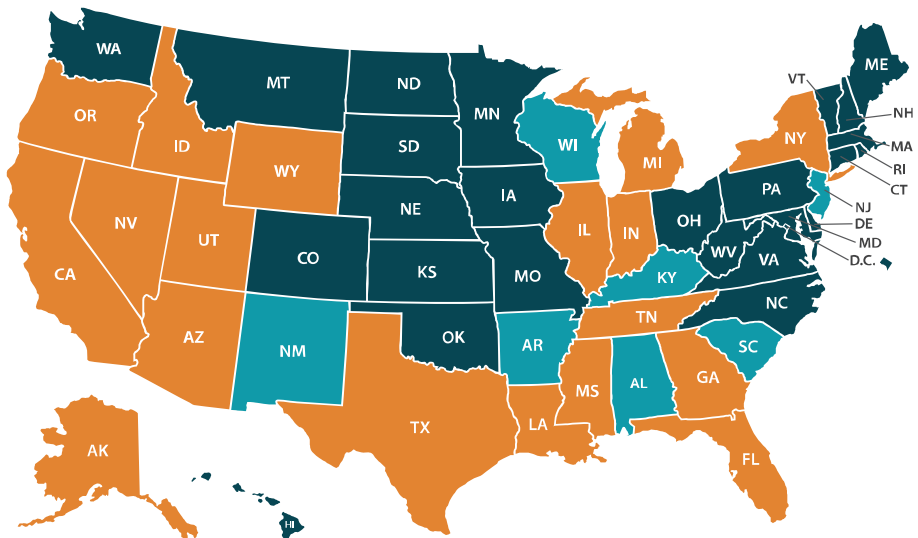
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Oklahoma	Oklahoma			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	42.1		3.4*	38.7	
<b>Age</b>					
18-39	30.2	-11.9*	1.6	28.5	-10.2*
40-64	40.3	-1.8*	3.2*	37.2	-1.5*
65+	67.5	25.4*	8.1*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	44.6	2.5*	2.9*	41.7	3.0*
Black/African American	37.9	-4.2*	5.1*	32.8	-5.9*
Hispanic	30.0	-12.1*	-0.9	30.9	-7.7*
Asian/Pacific Islander	43.1	0.9	1.7	41.4	2.7*
American Indian/Alaska Native	41.1	-1.0	7.2*	33.9	-4.8*
Other/multiple	37.8	-4.3*	2.9	34.9	-3.8*
<b>Sex</b>					
Male	37.4	-4.7*	2.0*	35.4	-3.3*
Female	46.6	4.5*	4.8*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	37.8	-4.3*	2.4*	35.4	-3.3*
1+ chronic conditions	53.4	11.3*	4.3*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	20.2	-21.9*	2.6*	17.6	-21.1*
Insured	45.9	3.8*	4.3*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	21.2	-20.9*	1.1	20.1	-18.6*
Has personal doctor	48.7	6.6*	4.6*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	44.0		3.9*	40.2	
Less than high school	35.5	-8.5*	1.5	34.0	-6.1*
High school graduate	41.1	-3.0*	5.5*	35.6	-4.6*
Some college or associate's degree	42.9	-1.1	4.1*	38.8	-1.4*
Bachelor's degree or higher	53.4	10.5*	5.4*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	38.3	-3.8*	3.5*	34.8	-3.9*
\$25,000 to \$49,999	42.4	0.3	5.9*	36.5	-2.2*
\$50,000 to \$74,999	46.1	4.0*	7.5*	38.6	-0.1
\$75,000 or more	44.5	2.4*	1.7	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

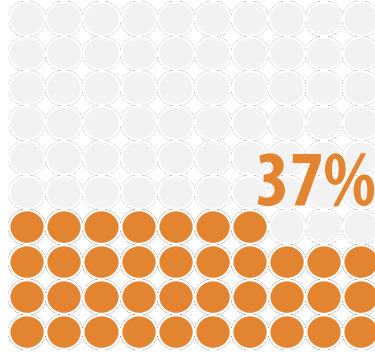
## Oregon

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

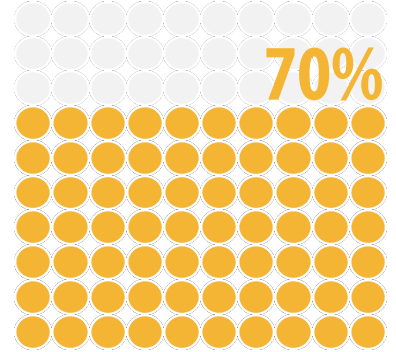
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

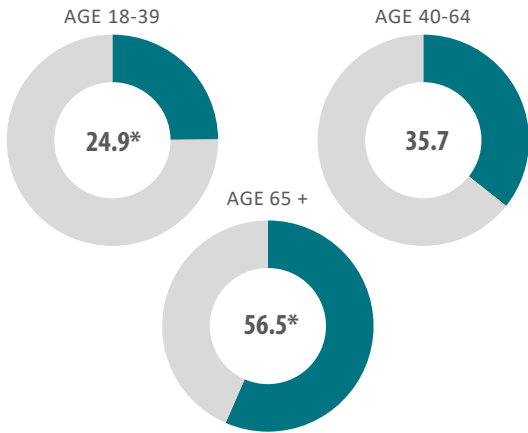
STATE RATE



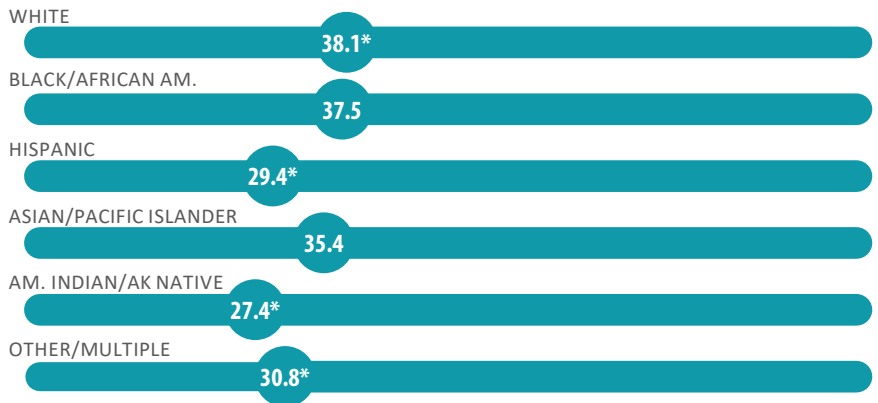
HERD IMMUNITY THRESHOLD



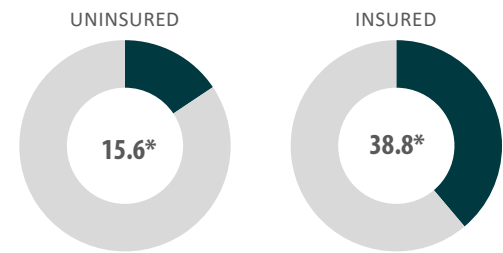
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

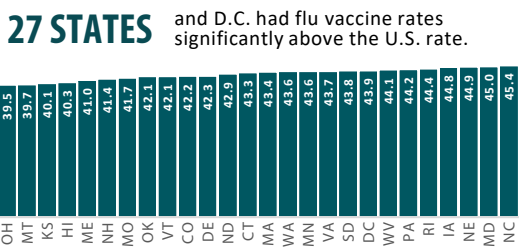
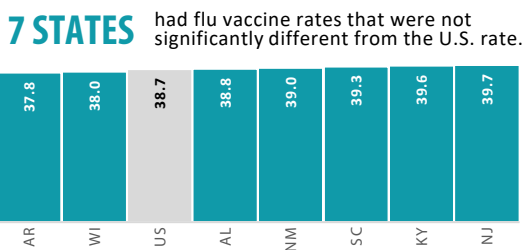
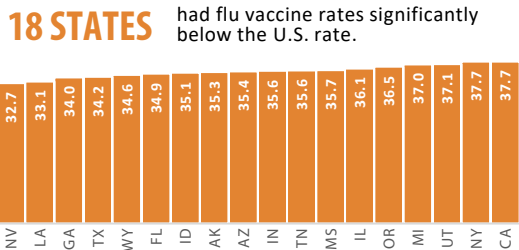


### Flu Vaccination Rates by Household Income

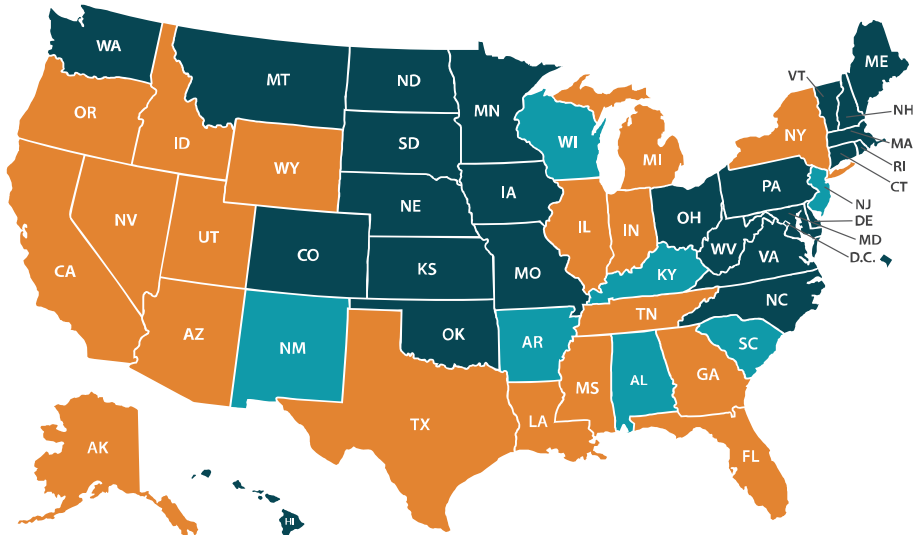


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Oregon	Oregon			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	36.5		-2.2*	38.7	
<b>Age</b>					
18-39	24.9	-11.6*	-3.6*	28.5	-10.2*
40-64	35.7	-0.8	-1.5*	37.2	-1.5*
65+	56.5	20.0*	-2.8*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	38.1	1.6*	-3.6*	41.7	3.0*
Black/African American	37.5	1.0	4.8	32.8	-5.9*
Hispanic	29.4	-7.1*	-1.5	30.9	-7.7*
Asian/Pacific Islander	35.4	-1.1	-6.0	41.4	2.7*
American Indian/Alaska Native	27.4	-9.2*	-6.5	33.9	-4.8*
Other/multiple	30.8	-5.7*	-4.0	34.9	-3.8*
<b>Sex</b>					
Male	33.5	-3.0*	-1.9*	35.4	-3.3*
Female	39.4	2.9*	-2.4*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	33.1	-3.4*	-2.3*	35.4	-3.3*
1+ chronic conditions	46.7	10.2*	-2.4*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	15.6	-20.9*	-2.0	17.6	-21.1*
Insured	38.8	2.3*	-2.8*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	16.9	-19.6*	-3.2*	20.1	-18.6*
Has personal doctor	42.7	6.1*	-1.4*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	38.3		-1.9*	40.2	
Less than high school	31.1	-7.2*	-3.0	34.0	-6.1*
High school graduate	30.5	-7.8*	-5.1*	35.6	-4.6*
Some college or associate's degree	37.2	-1.1	-1.5	38.8	-1.4*
Bachelor's degree or higher	47.0	9.8*	-0.9	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	32.6	-3.9*	-2.2*	34.8	-3.9*
\$25,000 to \$49,999	33.8	-2.7*	-2.7*	36.5	-2.2*
\$50,000 to \$74,999	36.7	0.2	-1.9	38.6	-0.1
\$75,000 or more	42.3	5.8*	-0.5	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





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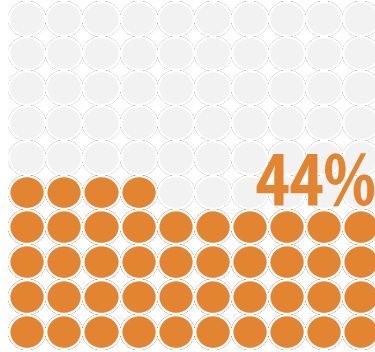
## Pennsylvania

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

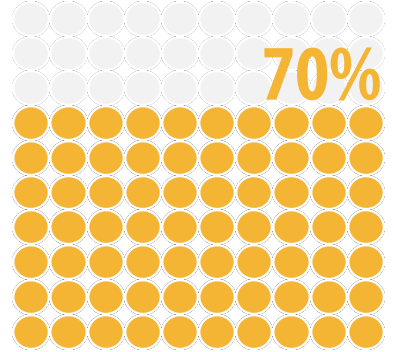
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

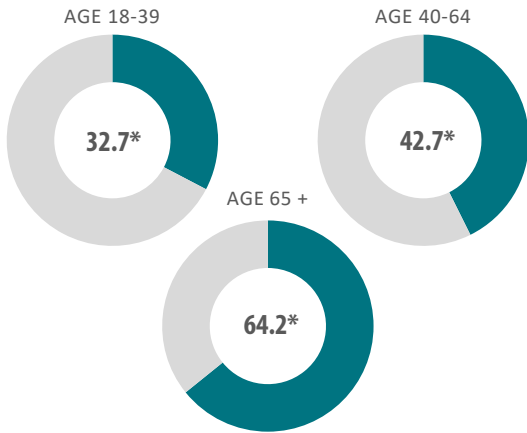
STATE RATE



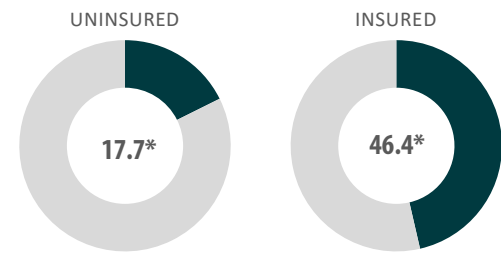
HERD IMMUNITY THRESHOLD



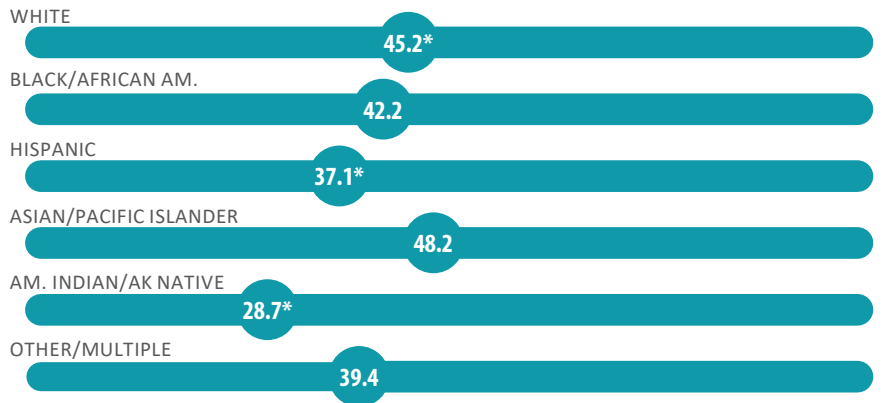
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

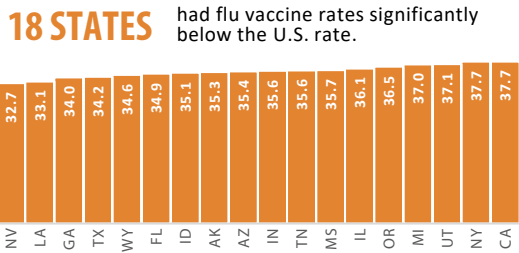


### Flu Vaccination Rates by Household Income



\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



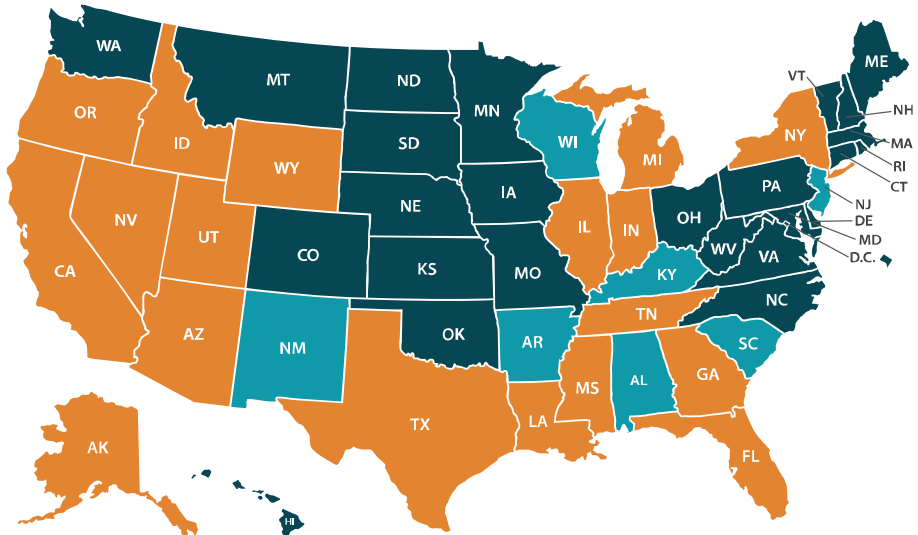
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Pennsylvania	Pennsylvania			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	44.2		5.6*	38.7	
<b>Age</b>					
18-39	32.7	-11.6*	4.1*	28.5	-10.2*
40-64	42.7	-1.6*	5.5*	37.2	-1.5*
65+	64.2	19.9*	4.8*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	45.2	1.0*	3.5*	41.7	3.0*
Black/African American	42.2	-2.0	9.5*	32.8	-5.9*
Hispanic	37.1	-7.2*	6.2*	30.9	-7.7*
Asian/Pacific Islander	48.2	3.9	6.8*	41.4	2.7*
American Indian/Alaska Native	28.7	-15.6*	-5.2	33.9	-4.8*
Other/multiple	39.4	-4.8	4.6	34.9	-3.8*
<b>Sex</b>					
Male	39.8	-4.5*	4.4*	35.4	-3.3*
Female	48.4	4.2*	6.6*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	40.0	-4.2*	4.6*	35.4	-3.3*
1+ chronic conditions	56.5	12.3*	7.4*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	17.7	-26.6*	0.1	17.6	-21.1*
Insured	46.4	2.2*	4.8*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	23.3	-20.9*	3.2*	20.1	-18.6*
Has personal doctor	48.0	3.8*	4.0*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	45.5		5.4*	40.2	
Less than high school	38.6	-6.9*	4.6*	34.0	-6.1*
High school graduate	41.8	-3.7*	6.3*	35.6	-4.6*
Some college or associate's degree	43.9	-1.7	5.1*	38.8	-1.4*
Bachelor's degree or higher	53.5	9.6*	5.5*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	42.9	-1.3	8.2*	34.8	-3.9*
\$25,000 to \$49,999	42.7	-1.6	6.2*	36.5	-2.2*
\$50,000 to \$74,999	42.8	-1.5	4.2*	38.6	-0.1
\$75,000 or more	47.0	2.8*	4.2*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

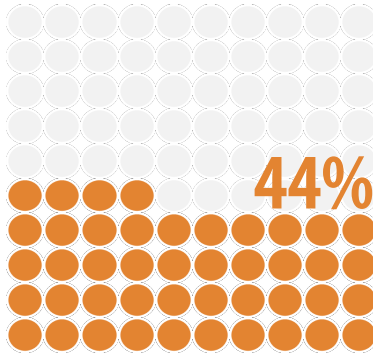
## Rhode Island

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

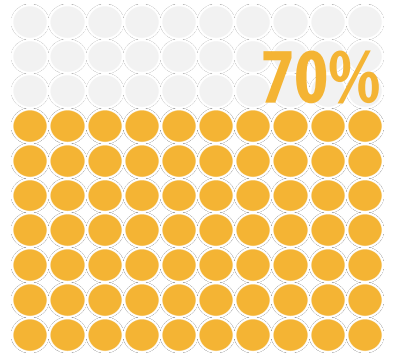
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

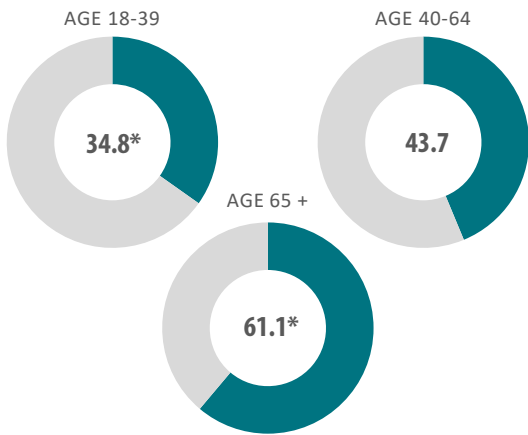
STATE RATE



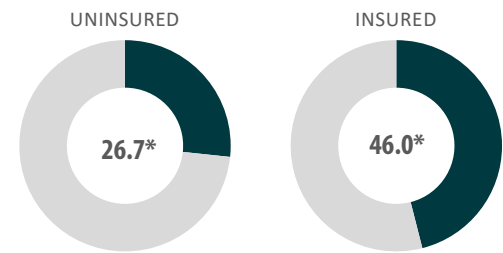
HERD IMMUNITY THRESHOLD



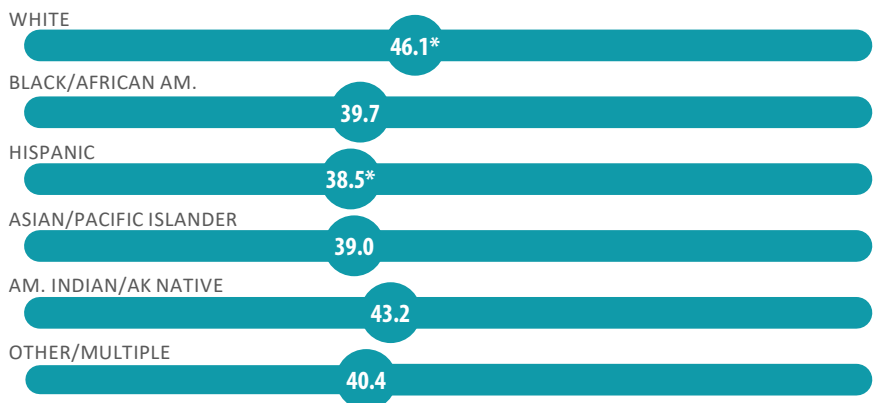
### Flu Vaccination Rates by Age



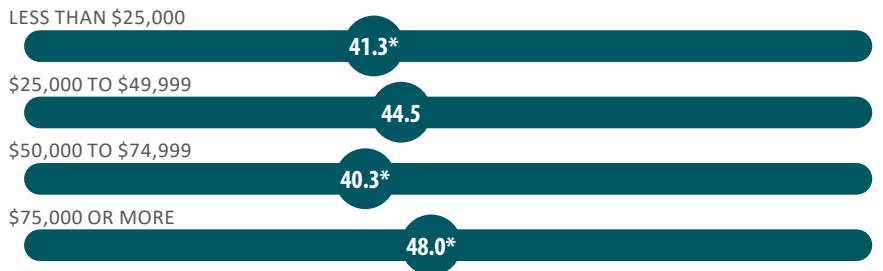
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

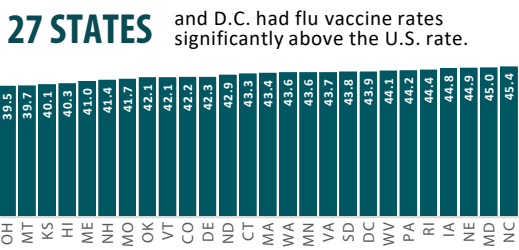
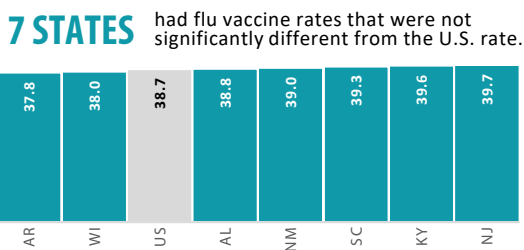
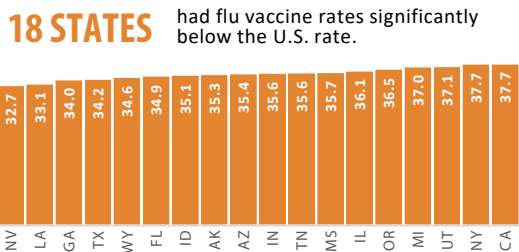


### Flu Vaccination Rates by Household Income

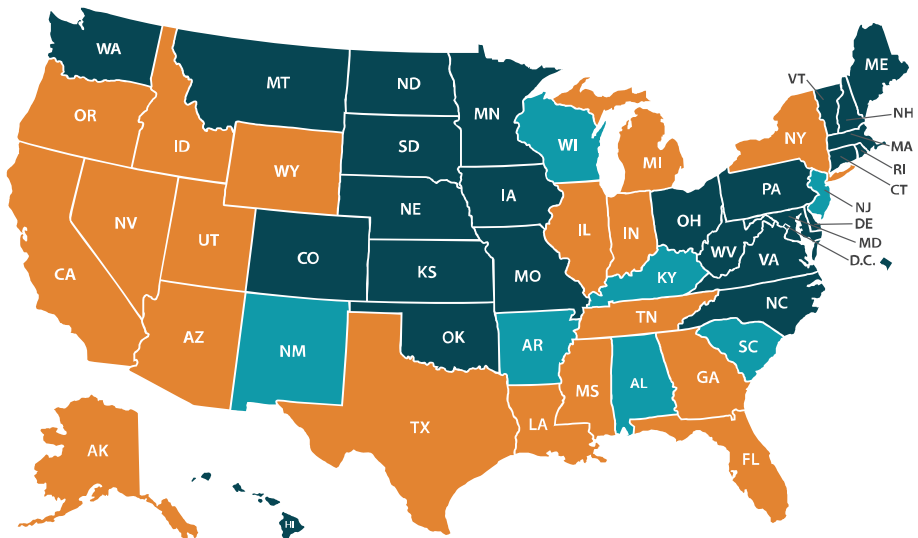


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Rhode Island	Rhode Island		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	44.4		5.7*	38.7	
<b>Age</b>					
18-39	34.8	-9.6*	6.3*	28.5	-10.2*
40-64	43.7	-0.6	6.6*	37.2	-1.5*
65+	61.1	16.8*	1.8*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	46.1	1.8*	4.4*	41.7	3.0*
Black/African American	39.7	-4.7	6.9*	32.8	-5.9*
Hispanic	38.5	-5.8*	7.6*	30.9	-7.7*
Asian/Pacific Islander	39.0	-5.4	-2.4	41.4	2.7*
American Indian/Alaska Native	43.2	-1.1	9.4	33.9	-4.8*
Other/multiple	40.4	-4.0	5.5	34.9	-3.8*
<b>Sex</b>					
Male	40.0	-4.4*	4.6*	35.4	-3.3*
Female	48.6	4.2*	6.8*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	42.1	-2.3*	6.7*	35.4	-3.3*
1+ chronic conditions	51.5	7.2*	2.4*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	26.7	-17.7*	9.1*	17.6	-21.1*
Insured	46.0	1.7*	4.4*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	24.4	-19.9*	4.3*	20.1	-18.6*
Has personal doctor	47.6	3.2*	3.5*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	45.6		5.4*	40.2	
Less than high school	40.1	-5.4*	6.1*	34.0	-6.1*
High school graduate	40.9	-4.7*	5.3*	35.6	-4.6*
Some college or associate's degree	43.2	-2.3*	4.5*	38.8	-1.4*
Bachelor's degree or higher	53.6	10.3*	5.6*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	41.3	-3.1*	6.5*	34.8	-3.9*
\$25,000 to \$49,999	44.5	0.1	8.0*	36.5	-2.2*
\$50,000 to \$74,999	40.3	-4.1*	1.7	38.6	-0.1
\$75,000 or more	48.0	3.6*	5.2*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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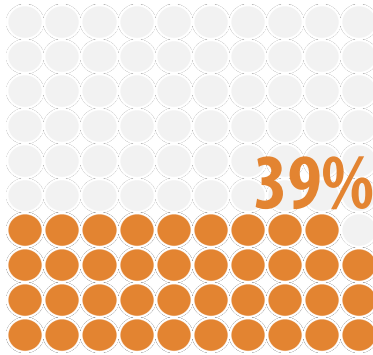
## South Carolina

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

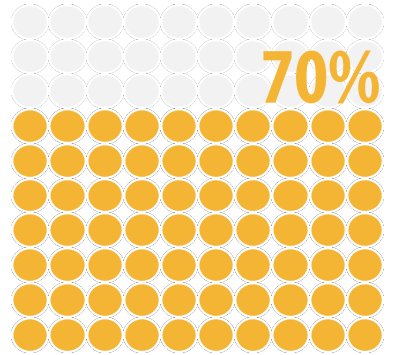
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

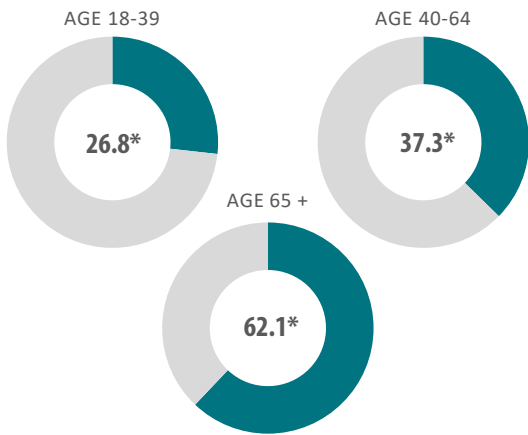
STATE RATE



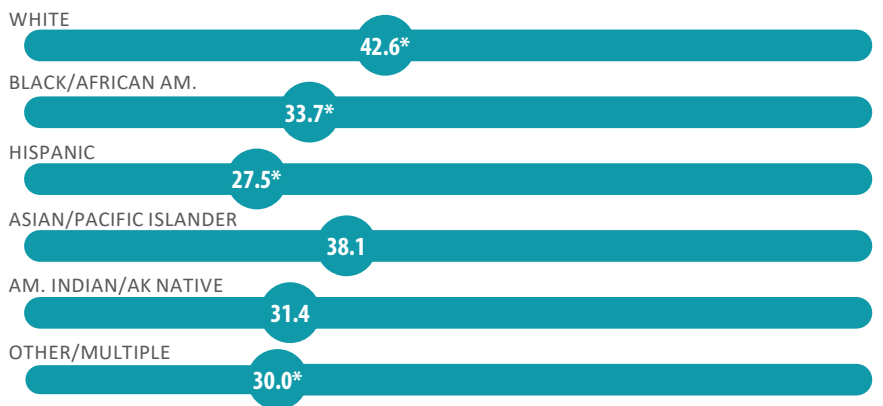
HERD IMMUNITY THRESHOLD



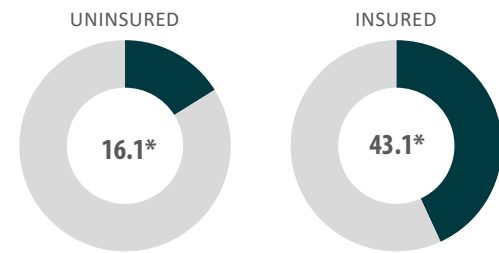
### Flu Vaccination Rates by Age



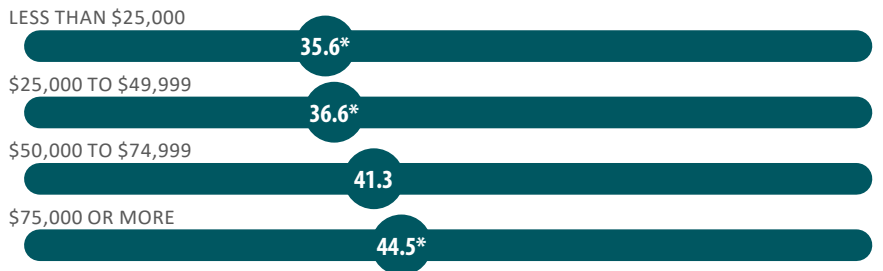
### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status



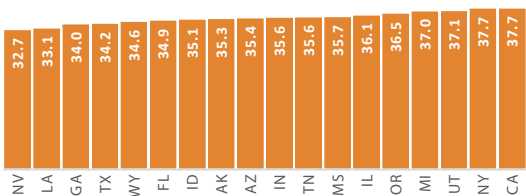
### Flu Vaccination Rates by Household Income



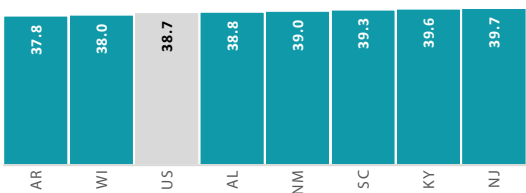
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates

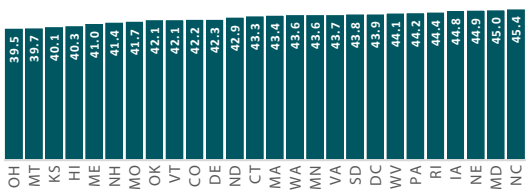
**18 STATES** had flu vaccine rates significantly below the U.S. rate.



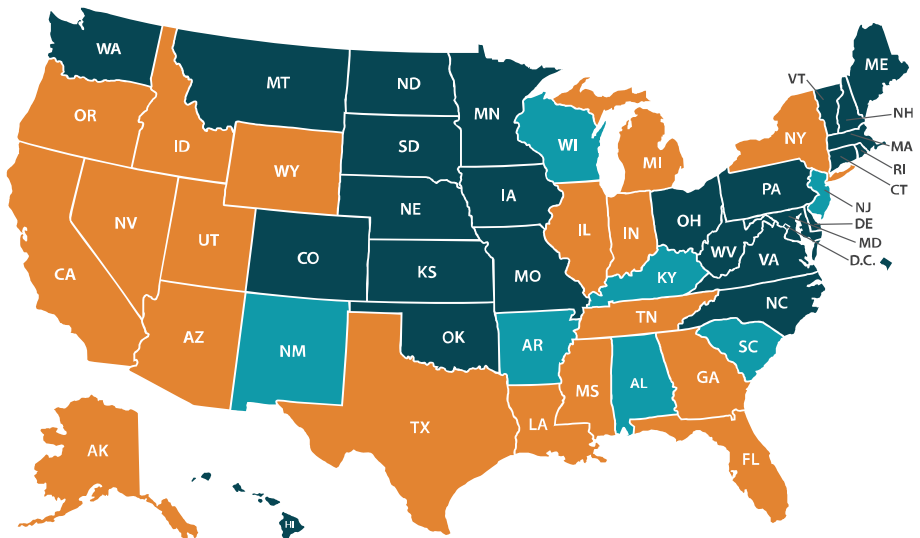
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

South Carolina	South Carolina		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	39.3		0.7	38.7	
<b>Age</b>					
18-39	26.8	-12.6*	-1.8*	28.5	-10.2*
40-64	37.3	-2.0*	0.2	37.2	-1.5*
65+	62.1	22.7*	2.7*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	42.6	3.3*	0.9	41.7	3.0*
Black/African American	33.7	-5.6*	0.9	32.8	-5.9*
Hispanic	27.5	-11.8*	-3.4	30.9	-7.7*
Asian/Pacific Islander	38.1	-1.3	-3.3	41.4	2.7*
American Indian/Alaska Native	31.4	-7.9	-2.5	33.9	-4.8*
Other/multiple	30.0	-9.4*	-4.9*	34.9	-3.8*
<b>Sex</b>					
Male	36.4	-2.9*	1.0	35.4	-3.3*
Female	42.2	2.8*	0.3	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	35.6	-3.7*	0.2	35.4	-3.3*
1+ chronic conditions	49.9	10.6*	0.8	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	16.1	-23.2*	-1.5	17.6	-21.1*
Insured	43.1	3.8*	1.5*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	18.7	-20.7*	-1.5	20.1	-18.6*
Has personal doctor	45.7	6.4*	1.6*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	41.6		1.4*	40.2	
Less than high school	34.9	-6.8*	0.8	34.0	-6.1*
High school graduate	38.2	-3.4*	2.6*	35.6	-4.6*
Some college or associate's degree	40.8	-0.8	2.0*	38.8	-1.4*
Bachelor's degree or higher	49.5	8.7*	1.6*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	35.6	-3.8*	0.8	34.8	-3.9*
\$25,000 to \$49,999	36.6	-2.7*	0.1	36.5	-2.2*
\$50,000 to \$74,999	41.3	1.9	2.7*	38.6	-0.1
\$75,000 or more	44.5	5.2*	1.7*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





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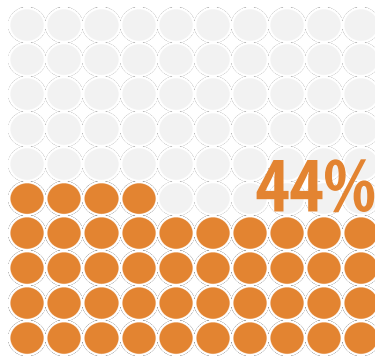
## South Dakota

Though there is no consensus on one singular figure needed to achieve what is commonly known as "herd immunity" (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

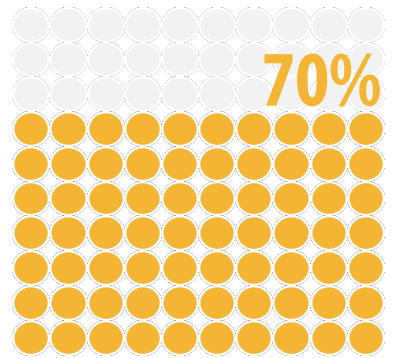
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

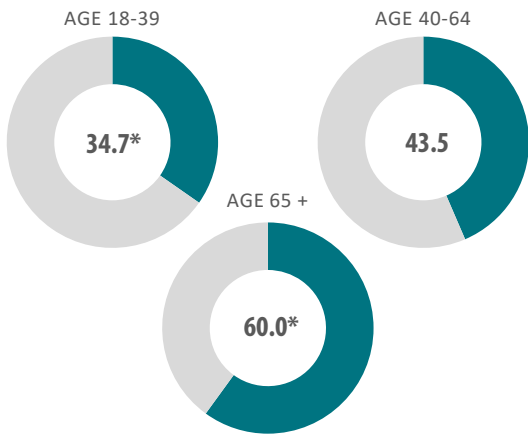
STATE RATE



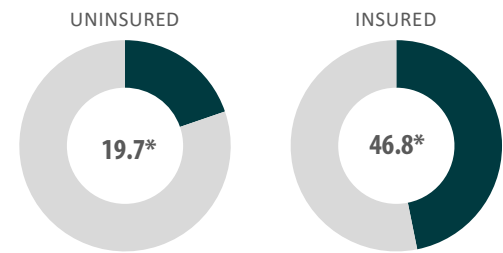
HERD IMMUNITY THRESHOLD



### Flu Vaccination Rates by Age



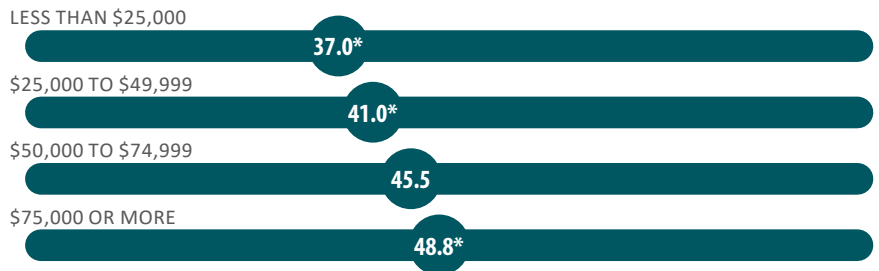
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

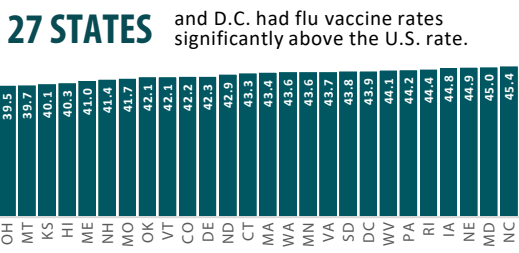
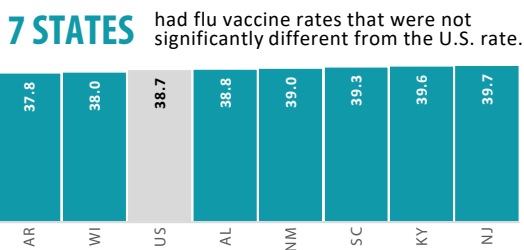
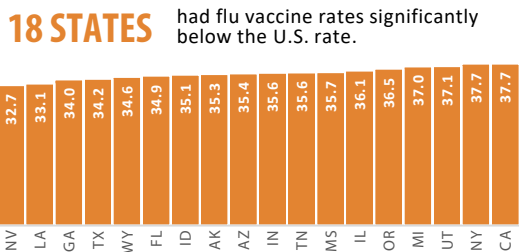


### Flu Vaccination Rates by Household Income

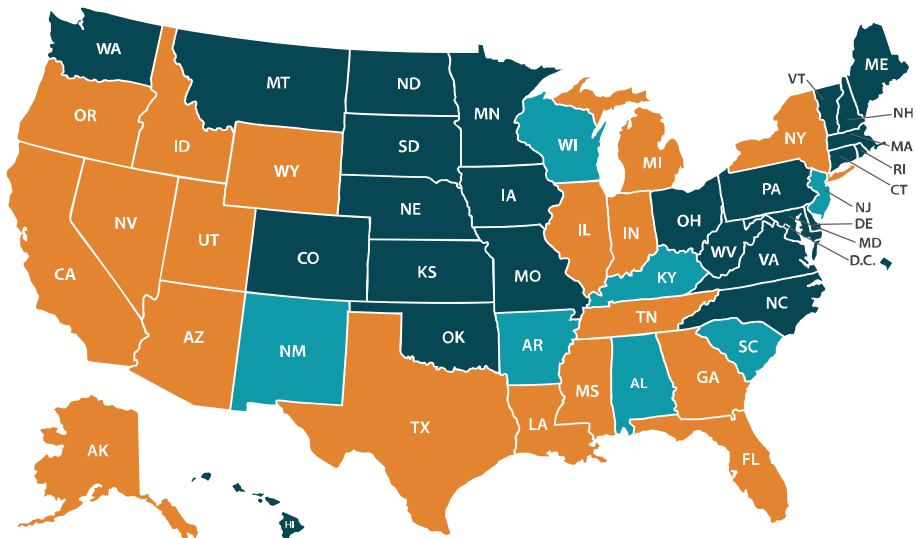


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

South Dakota	South Dakota		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	43.8		5.2*	38.7	
<b>Age</b>					
18-39	34.7	-9.1*	6.2*	28.5	-10.2*
40-64	43.5	-0.3	6.4*	37.2	-1.5*
65+	60.0	16.2*	0.6	59.4	20.7*
<b>Race/Ethnicity</b>					
White	45.2	1.4*	3.5*	41.7	3.0*
Black/African American	31.5	-12.3	-1.3	32.8	-5.9*
Hispanic	32.1	-11.8*	1.1	30.9	-7.7*
Asian/Pacific Islander	31.3	-12.5	-10.1	41.4	2.7*
American Indian/Alaska Native	38.4	-5.4*	4.5	33.9	-4.8*
Other/multiple	37.9	-5.9	3.1	34.9	-3.8*
<b>Sex</b>					
Male	37.8	-6.0*	2.5*	35.4	-3.3*
Female	49.9	6.0*	8.1*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	41.6	-2.2*	6.2*	35.4	-3.3*
1+ chronic conditions	51.6	7.7*	2.4	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	19.7	-24.1*	2.2	17.6	-21.1*
Insured	46.8	3.0*	5.2*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	26.1	-17.8*	6.0*	20.1	-18.6*
Has personal doctor	49.6	5.7*	5.5*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	45.6		5.4*	40.2	
Less than high school	35.8	-9.7*	1.8	34.0	-6.1*
High school graduate	39.4	-6.2*	3.8*	35.6	-4.6*
Some college or associate's degree	45.9	0.3	7.1*	38.8	-1.4*
Bachelor's degree or higher	54.6	8.7*	6.6*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	37.0	-6.9*	2.2*	34.8	-3.9*
\$25,000 to \$49,999	41.0	-2.8*	4.5*	36.5	-2.2*
\$50,000 to \$74,999	45.5	1.7	6.9*	38.6	-0.1
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Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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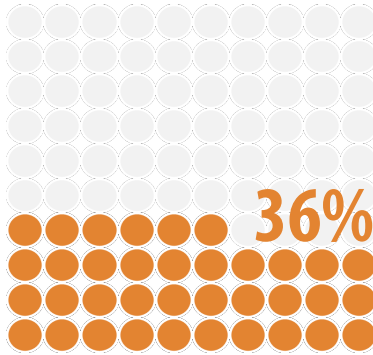
## Tennessee

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

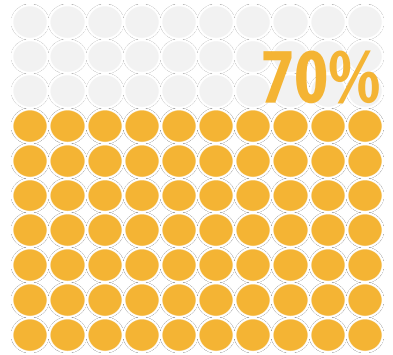
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

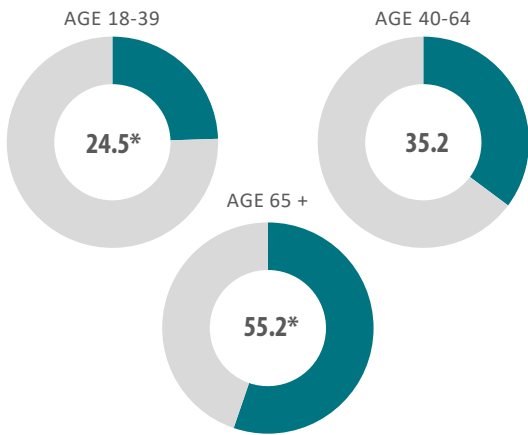
STATE RATE



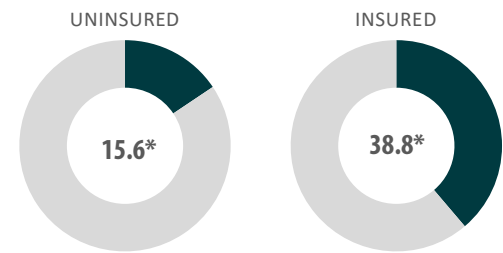
HERD IMMUNITY THRESHOLD



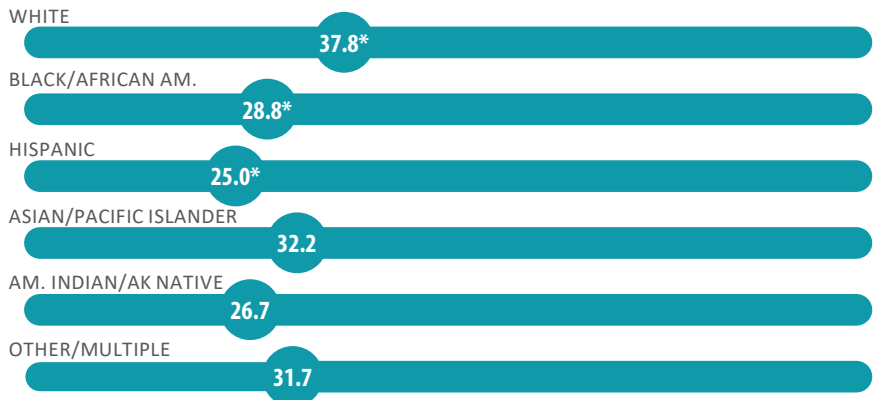
### Flu Vaccination Rates by Age



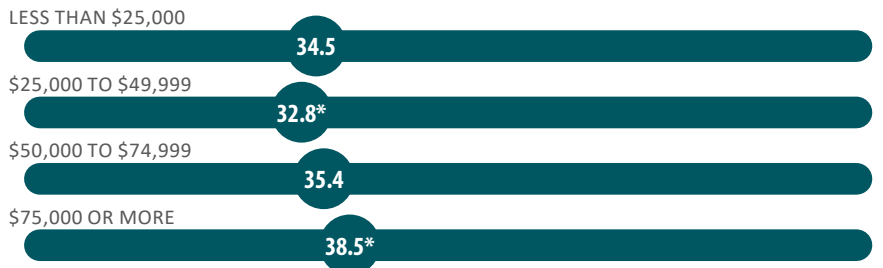
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

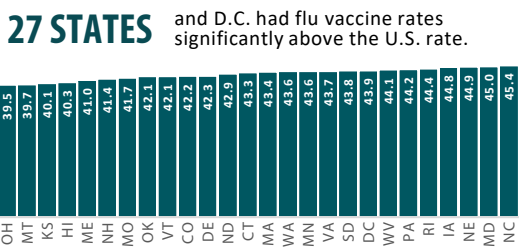
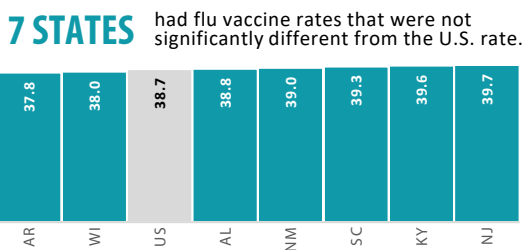
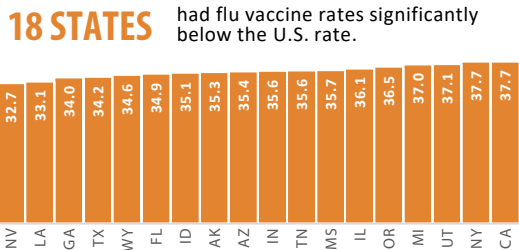


### Flu Vaccination Rates by Household Income

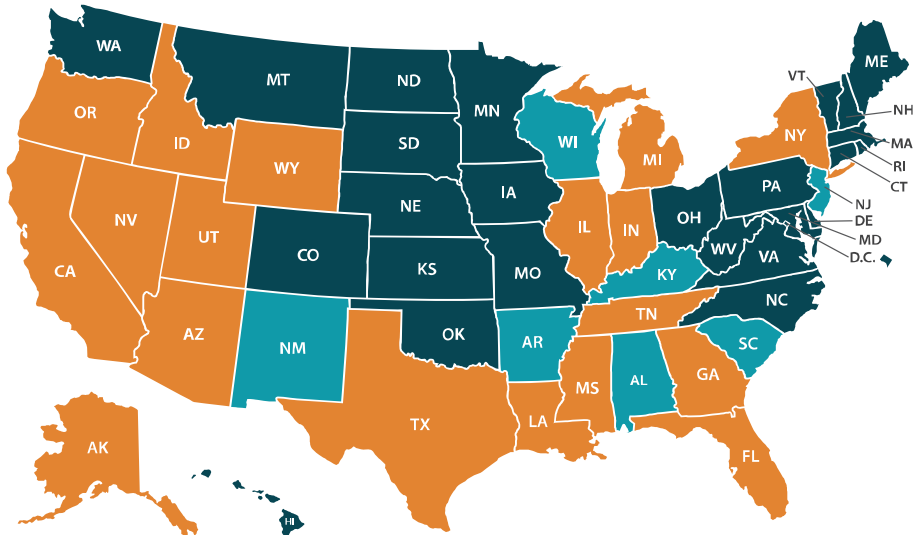


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Tennessee	Tennessee			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	35.6		-3.0*	38.7	
<b>Age</b>					
18-39	24.5	-11.2*	-4.0*	28.5	-10.2*
40-64	35.2	-0.4	-2.0*	37.2	-1.5*
65+	55.2	19.6*	-4.1*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	37.8	2.2*	-3.9*	41.7	3.0*
Black/African American	28.8	-6.9*	-4.0*	32.8	-5.9*
Hispanic	25.0	-10.6*	-5.9	30.9	-7.7*
Asian/Pacific Islander	32.2	-3.4	-9.1	41.4	2.7*
American Indian/Alaska Native	26.7	-8.9	-7.1	33.9	-4.8*
Other/multiple	31.7	-3.9	-3.1	34.9	-3.8*
<b>Sex</b>					
Male	32.1	-3.6*	-3.3*	35.4	-3.3*
Female	39.0	3.4*	-2.8*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	32.7	-2.9*	-2.7*	35.4	-3.3*
1+ chronic conditions	43.5	7.8*	-5.7*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	15.6	-20.0*	-2.0	17.6	-21.1*
Insured	38.8	3.2*	-2.8*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	19.3	-16.3*	-0.8	20.1	-18.6*
Has personal doctor	40.8	5.2*	-3.3*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	37.0		-3.2*	40.2	
Less than high school	35.7	-1.3	1.7	34.0	-6.1*
High school graduate	33.6	-3.3*	-2.0*	35.6	-4.6*
Some college or associate's degree	34.0	-2.9*	-4.8*	38.8	-1.4*
Bachelor's degree or higher	45.0	11.0*	-2.9*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	34.5	-1.1	-0.2	34.8	-3.9*
\$25,000 to \$49,999	32.8	-2.8*	-3.7*	36.5	-2.2*
\$50,000 to \$74,999	35.4	-0.2	-3.2*	38.6	-0.1
\$75,000 or more	38.5	2.8*	-4.4*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

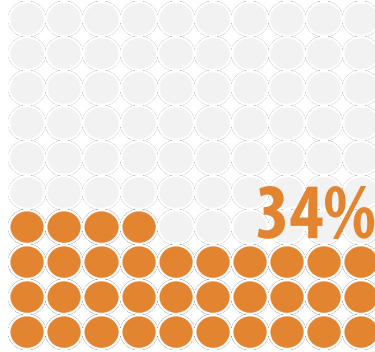
## Texas

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

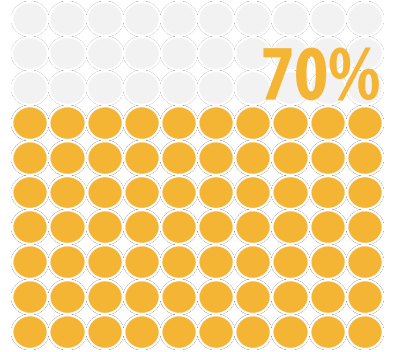
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

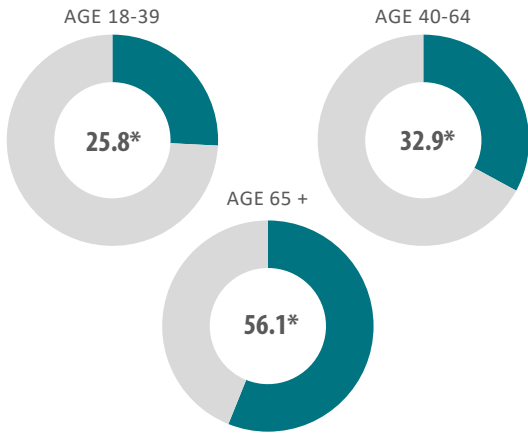
STATE RATE



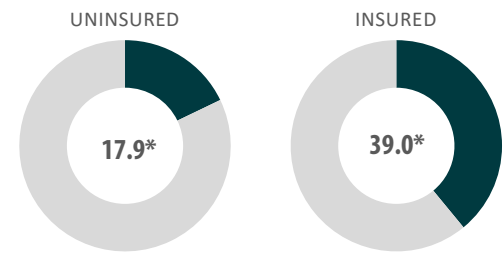
HERD IMMUNITY THRESHOLD



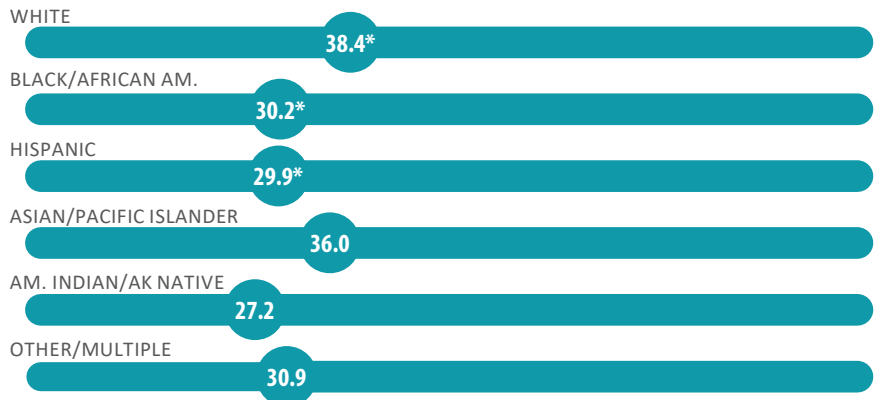
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

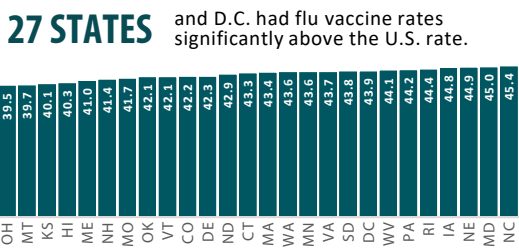
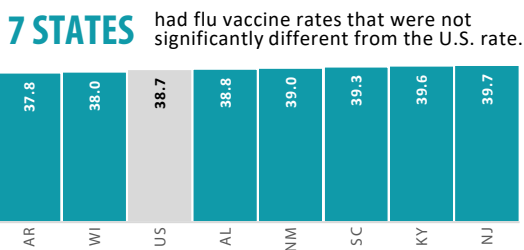
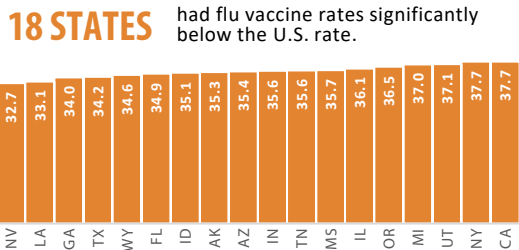


### Flu Vaccination Rates by Household Income

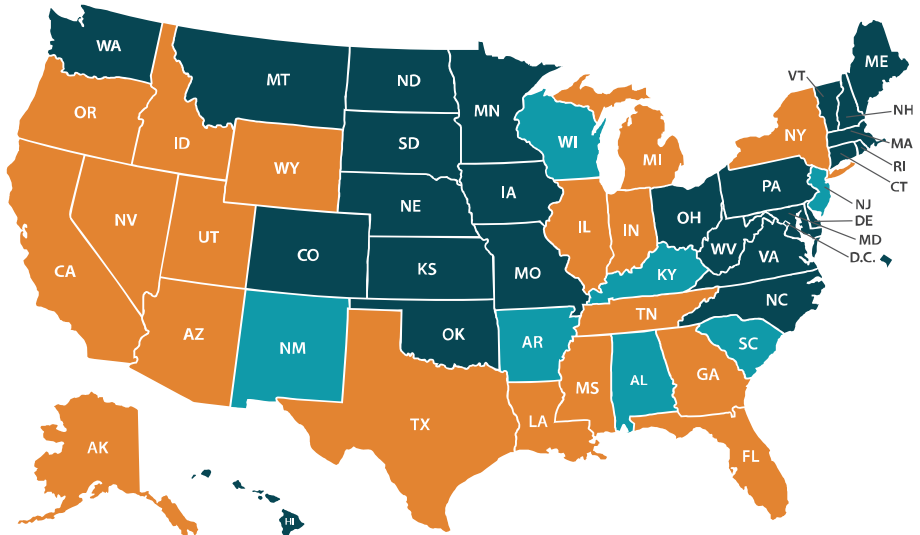


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Texas	Texas			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	34.2		-4.5*	38.7	
<b>Age</b>					
18-39	25.8	-8.4*	-2.7*	28.5	-10.2*
40-64	32.9	-1.2*	-4.3*	37.2	-1.5*
65+	56.1	21.9*	-3.3*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	38.4	4.3*	-3.3*	41.7	3.0*
Black/African American	30.2	-4.0*	-2.6	32.8	-5.9*
Hispanic	29.9	-4.2*	-1.0	30.9	-7.7*
Asian/Pacific Islander	36.0	1.8	-5.4	41.4	2.7*
American Indian/Alaska Native	27.2	-7.0	-6.7	33.9	-4.8*
Other/multiple	30.9	-3.3	-4.0	34.9	-3.8*
<b>Sex</b>					
Male	31.5	-2.7*	-3.9*	35.4	-3.3*
Female	36.7	2.5*	-5.1*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	31.0	-3.1*	-4.4*	35.4	-3.3*
1+ chronic conditions	44.7	10.5*	-4.4*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	17.9	-16.3*	0.3	17.6	-21.1*
Insured	39.0	4.9*	-2.6*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	19.1	-15.1*	-1.0	20.1	-18.6*
Has personal doctor	41.3	7.1*	-2.8*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	35.3		-4.9*	40.2	
Less than high school	30.7	-4.6*	-3.3*	34.0	-6.1*
High school graduate	29.0	-6.2*	-6.5*	35.6	-4.6*
Some college or associate's degree	35.4	0.1	-3.4*	38.8	-1.4*
Bachelor's degree or higher	43.0	7.7*	-4.9*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	30.9	-3.3*	-3.9*	34.8	-3.9*
\$25,000 to \$49,999	30.9	-3.2*	-5.6*	36.5	-2.2*
\$50,000 to \$74,999	35.0	0.9	-3.5*	38.6	-0.1
\$75,000 or more	38.0	3.8*	-4.8*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

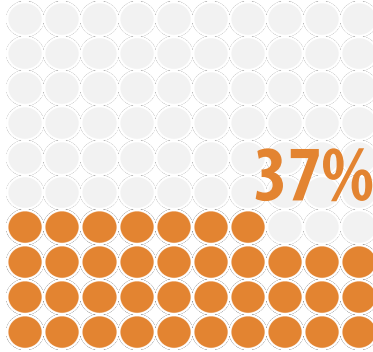
## Utah

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

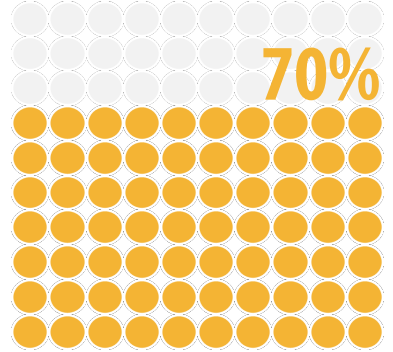
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

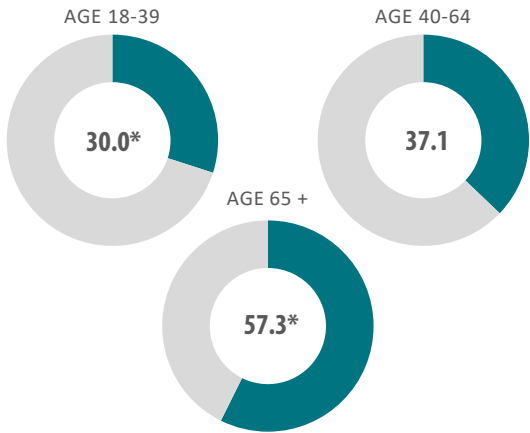
STATE RATE



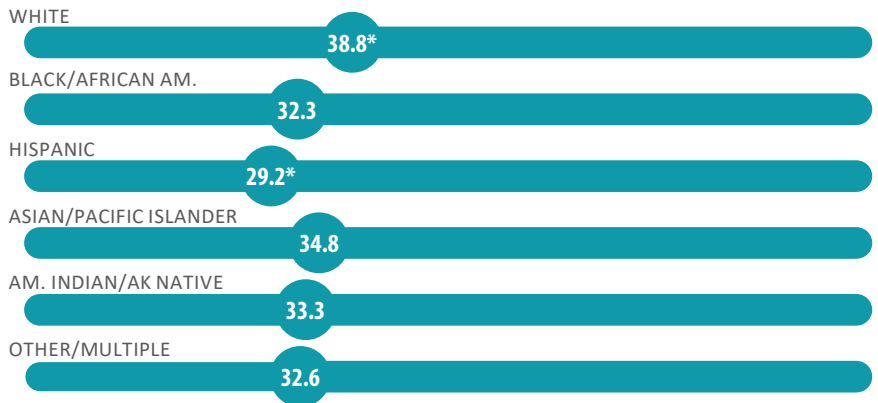
HERD IMMUNITY THRESHOLD



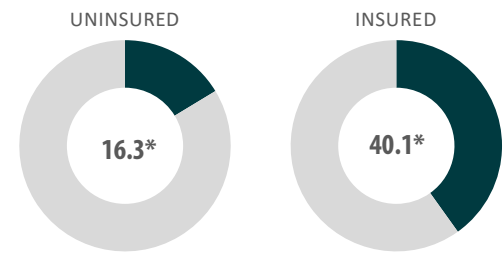
### Flu Vaccination Rates by Age



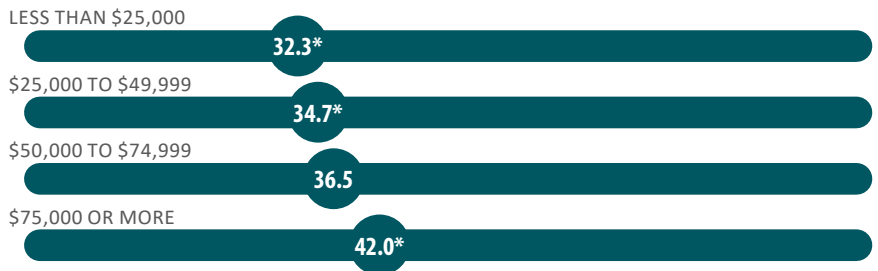
### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status



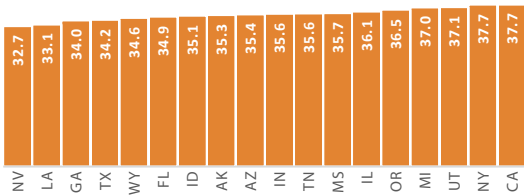
### Flu Vaccination Rates by Household Income



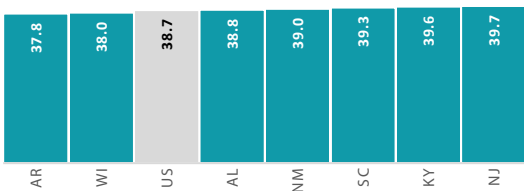
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates

**18 STATES** had flu vaccine rates significantly below the U.S. rate.



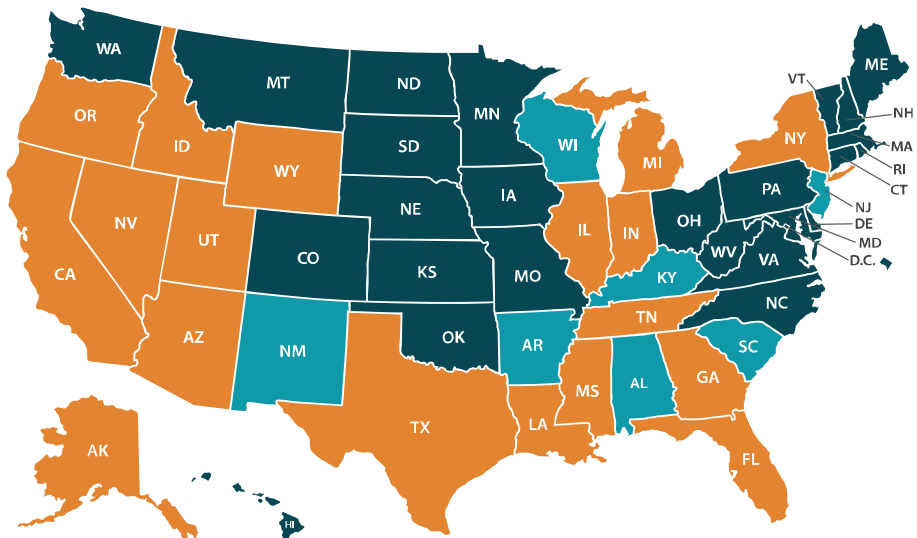
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Utah	Utah		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	37.1		-1.6*	38.7	
<b>Age</b>					
18-39	30.0	-7.1*	1.5*	28.5	-10.2*
40-64	37.1	0.1	0.0	37.2	-1.5*
65+	57.3	20.3*	-2.1*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	38.8	1.7*	-2.9*	41.7	3.0*
Black/African American	32.3	-4.8	-0.5	32.8	-5.9*
Hispanic	29.2	-7.9*	-1.7	30.9	-7.7*
Asian/Pacific Islander	34.8	-2.2	-6.5*	41.4	2.7*
American Indian/Alaska Native	33.3	-3.8	-0.6	33.9	-4.8*
Other/multiple	32.6	-4.4	-2.2	34.9	-3.8*
<b>Sex</b>					
Male	34.1	-3.0*	-1.3*	35.4	-3.3*
Female	40.1	3.0*	-1.8*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	34.3	-2.8*	-1.1*	35.4	-3.3*
1+ chronic conditions	48.2	11.1*	-0.9	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	16.3	-20.7*	-1.3	17.6	-21.1*
Insured	40.1	3.0*	-1.5*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	20.3	-16.8*	0.2	20.1	-18.6*
Has personal doctor	43.5	6.5*	-0.6	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	38.9		-1.3*	40.2	
Less than high school	29.0	-9.9*	-5.0*	34.0	-6.1*
High school graduate	31.5	-7.4*	-4.1*	35.6	-4.6*
Some college or associate's degree	38.3	-0.6	-0.4	38.8	-1.4*
Bachelor's degree or higher	47.1	8.8*	-0.8	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	32.3	-4.7*	-2.4*	34.8	-3.9*
\$25,000 to \$49,999	34.7	-2.4*	-1.8*	36.5	-2.2*
\$50,000 to \$74,999	36.5	-0.5	-2.1*	38.6	-0.1
\$75,000 or more	42.0	4.9*	-0.9	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





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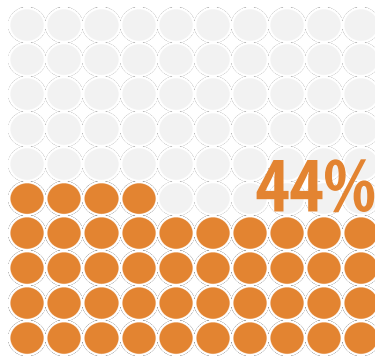
## Virginia

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

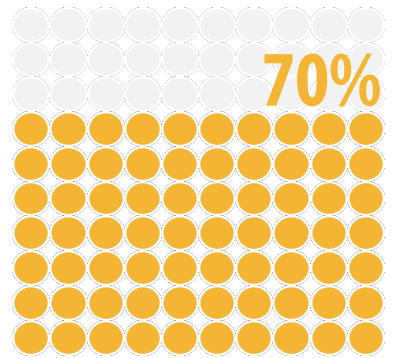
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

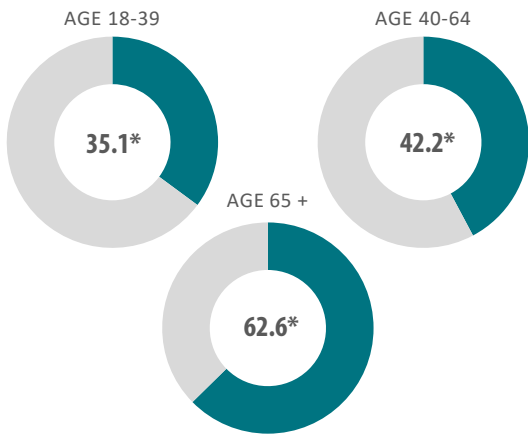
STATE RATE



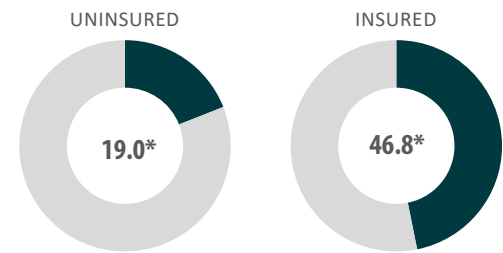
HERD IMMUNITY THRESHOLD



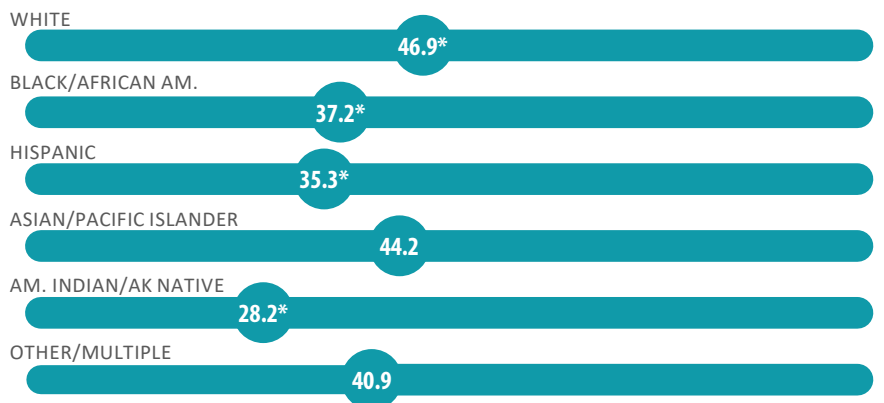
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

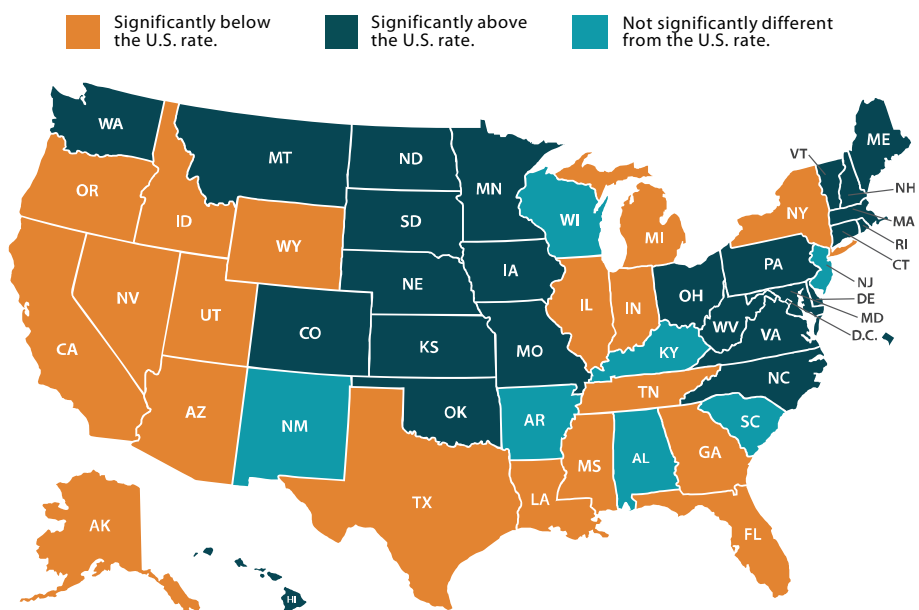
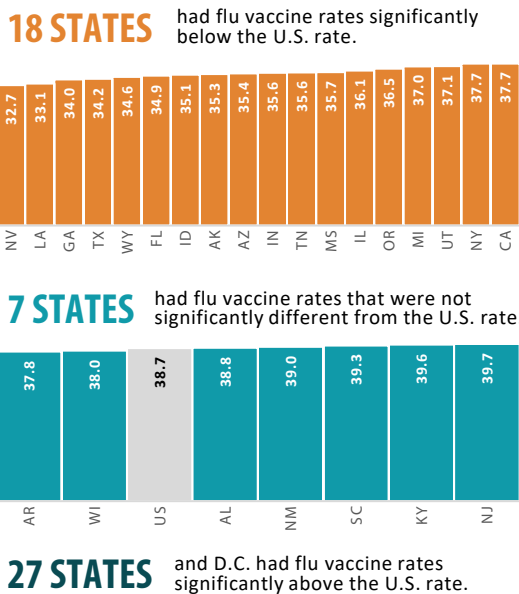


### Flu Vaccination Rates by Household Income



\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Virginia	Virginia		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	43.7		5.0*	38.7	
<b>Age</b>					
18-39	35.1	-8.5*	6.6*	28.5	-10.2*
40-64	42.2	-1.5*	5.0*	37.2	-1.5*
65+	62.6	19.0*	3.3*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	46.9	3.3*	5.2*	41.7	3.0*
Black/African American	37.2	-6.4*	4.4*	32.8	-5.9*
Hispanic	35.3	-8.4*	4.4*	30.9	-7.7*
Asian/Pacific Islander	44.2	0.5	2.8	41.4	2.7*
American Indian/Alaska Native	28.2	-15.5*	-5.7	33.9	-4.8*
Other/multiple	40.9	-2.8	6.1*	34.9	-3.8*
<b>Sex</b>					
Male	40.2	-3.5*	4.8*	35.4	-3.3*
Female	47.1	3.4*	5.2*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	41.1	-2.6*	5.7*	35.4	-3.3*
1+ chronic conditions	52.5	8.8*	3.4*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	19.0	-24.7*	1.4	17.6	-21.1*
Insured	46.8	3.2*	5.2*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	25.7	-18.0*	5.6*	20.1	-18.6*
Has personal doctor	49.0	5.3*	4.9*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	45.0		4.8*	40.2	
Less than high school	33.5	-11.4*	-0.5	34.0	-6.1*
High school graduate	38.9	-6.1*	3.3*	35.6	-4.6*
Some college or associate's degree	44.0	-1.0	5.2*	38.8	-1.4*
Bachelor's degree or higher	52.9	8.9*	5.0*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	35.8	-7.9*	1.0	34.8	-3.9*
\$25,000 to \$49,999	40.8	-2.9*	4.3*	36.5	-2.2*
\$50,000 to \$74,999	43.2	-0.4	4.7*	38.6	-0.1
\$75,000 or more	49.3	5.7*	6.5*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

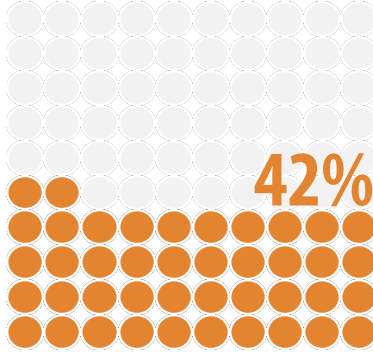
## Vermont

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

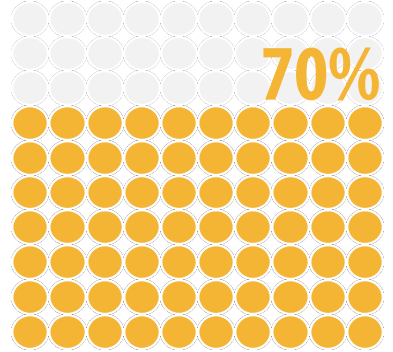
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

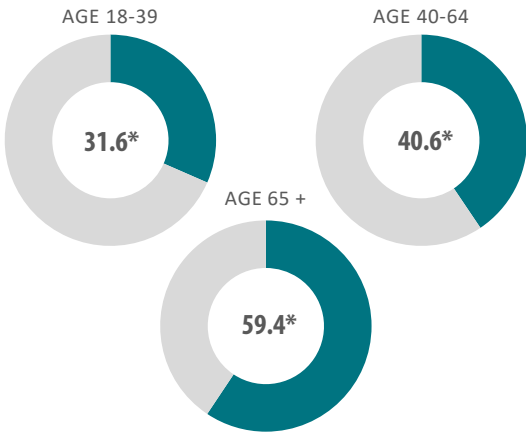
STATE RATE



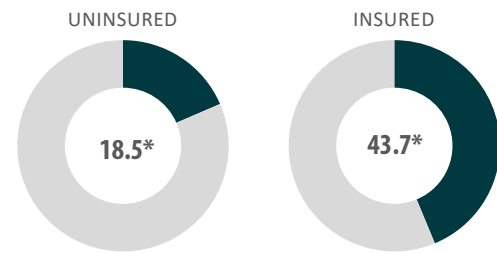
HERD IMMUNITY THRESHOLD



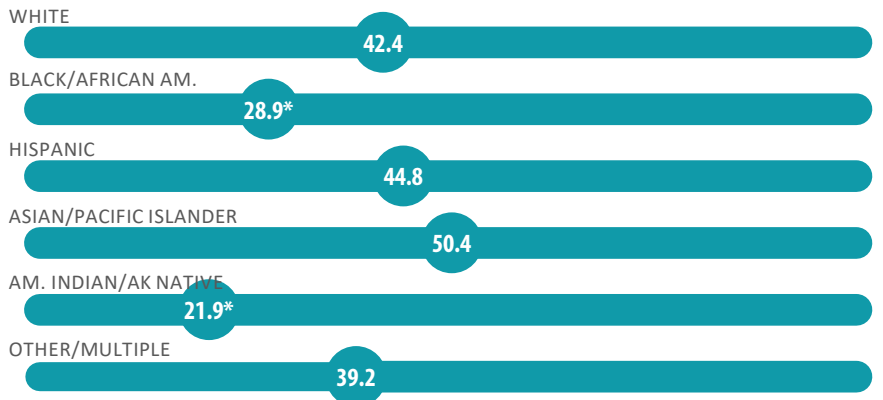
### Flu Vaccination Rates by Age



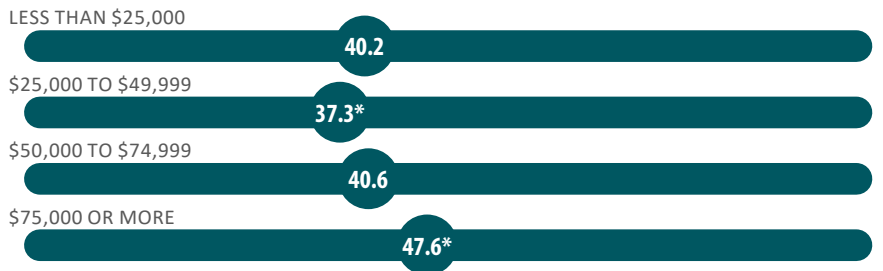
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity



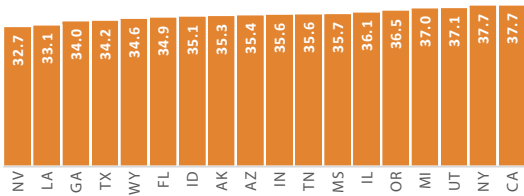
### Flu Vaccination Rates by Household Income



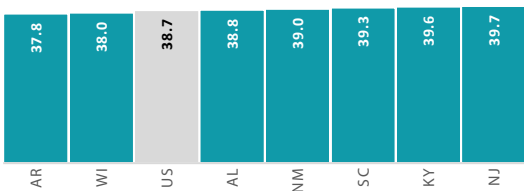
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates

**18 STATES** had flu vaccine rates significantly below the U.S. rate.



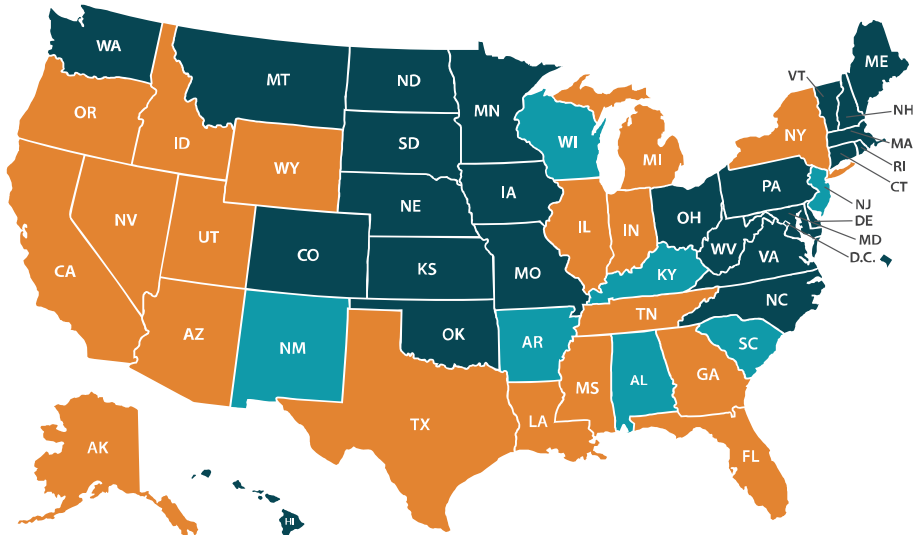
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Vermont	Vermont			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	42.1		3.5*	38.7	
<b>Age</b>					
18-39	31.6	-10.6*	3.0*	28.5	-10.2*
40-64	40.6	-1.6*	3.4*	37.2	-1.5*
65+	59.4	17.2*	0.0	59.4	20.7*
<b>Race/Ethnicity</b>					
White	42.4	0.2	0.7	41.7	3.0*
Black/African American	28.9	-13.2*	-3.9	32.8	-5.9*
Hispanic	44.8	2.6	13.8*	30.9	-7.7*
Asian/Pacific Islander	50.4	8.3	9.1	41.4	2.7*
American Indian/Alaska Native	21.9	-20.2*	-12.0*	33.9	-4.8*
Other/multiple	39.2	-2.9	4.3	34.9	-3.8*
<b>Sex</b>					
Male	39.1	-3.1*	3.7*	35.4	-3.3*
Female	45.1	3.0*	3.3*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	39.6	-2.6*	4.2*	35.4	-3.3*
1+ chronic conditions	50.5	8.3*	1.3	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	18.5	-23.6*	0.9	17.6	-21.1*
Insured	43.7	1.6*	2.1*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	19.7	-22.4*	-0.4	20.1	-18.6*
Has personal doctor	45.6	3.4*	1.5*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	43.8		3.7*	40.2	
Less than high school	41.8	-2.0	7.8*	34.0	-6.1*
High school graduate	38.2	-5.7*	2.6*	35.6	-4.6*
Some college or associate's degree	41.6	-2.2*	2.8*	38.8	-1.4*
Bachelor's degree or higher	50.3	8.7*	2.4*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	40.2	-1.9	5.4*	34.8	-3.9*
\$25,000 to \$49,999	37.3	-4.8*	0.8	36.5	-2.2*
\$50,000 to \$74,999	40.6	-1.5	2.0	38.6	-0.1
\$75,000 or more	47.6	5.4*	4.7*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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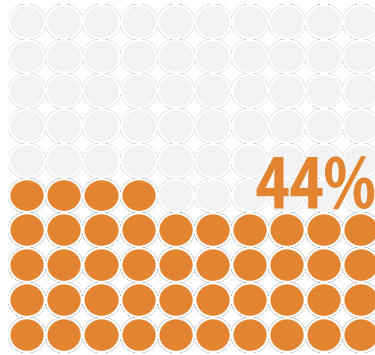
## Washington

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

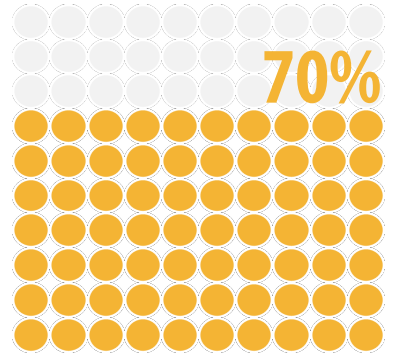
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

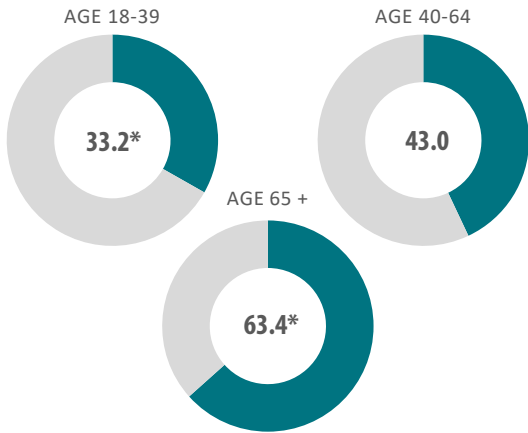
STATE RATE



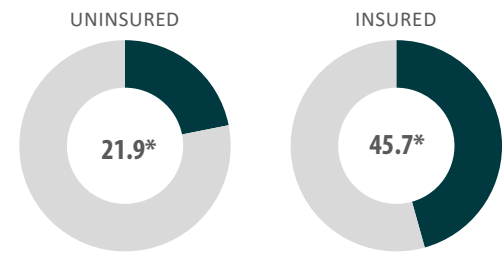
HERD IMMUNITY THRESHOLD



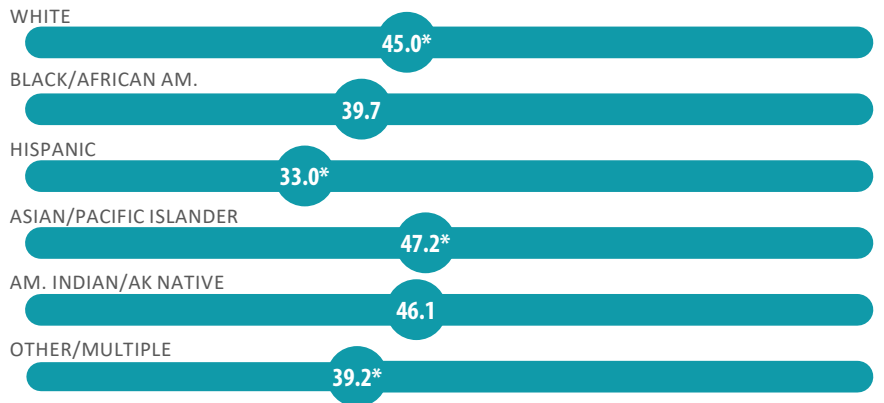
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

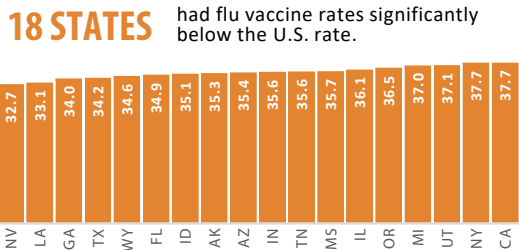


### Flu Vaccination Rates by Household Income

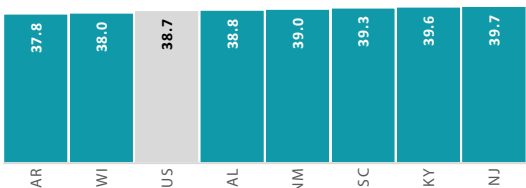


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



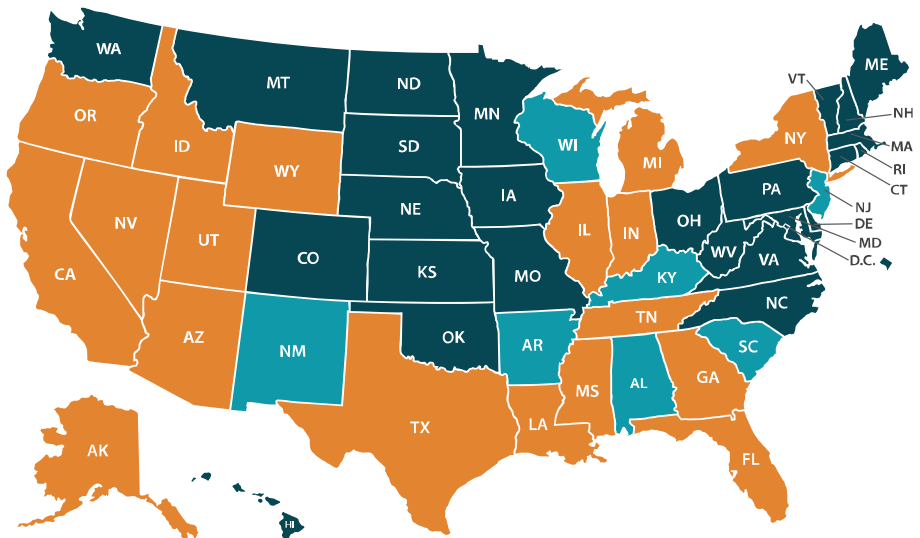
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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Washington	Washington			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	43.6		4.9*	38.7	
<b>Age</b>					
18-39	33.2	-10.4*	4.7*	28.5	-10.2*
40-64	43.0	-0.6	5.8*	37.2	-1.5*
65+	63.4	19.8*	4.0*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	45.0	1.4*	3.3*	41.7	3.0*
Black/African American	39.7	-3.9	6.9*	32.8	-5.9*
Hispanic	33.0	-10.6*	2.1	30.9	-7.7*
Asian/Pacific Islander	47.2	3.6*	5.9*	41.4	2.7*
American Indian/Alaska Native	46.1	2.5	12.3*	33.9	-4.8*
Other/multiple	39.2	-4.4*	4.3*	34.9	-3.8*
<b>Sex</b>					
Male	40.1	-3.5*	4.7*	35.4	-3.3*
Female	47.1	3.5*	5.3*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	40.3	-3.3*	4.9*	35.4	-3.3*
1+ chronic conditions	54.7	11.1*	5.6*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	21.9	-21.7*	4.3*	17.6	-21.1*
Insured	45.7	2.1*	4.1*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	23.2	-20.4*	3.1*	20.1	-18.6*
Has personal doctor	50.0	6.4*	5.9*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	45.2		5.0*	40.2	
Less than high school	32.8	-12.4*	-1.3	34.0	-6.1*
High school graduate	37.6	-7.5*	2.1*	35.6	-4.6*
Some college or associate's degree	44.2	-1.0	5.4*	38.8	-1.4*
Bachelor's degree or higher	54.1	9.9*	6.1*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	36.6	-7.0*	1.8	34.8	-3.9*
\$25,000 to \$49,999	41.9	-1.7	5.4*	36.5	-2.2*
\$50,000 to \$74,999	43.6	0.0	5.0*	38.6	-0.1
\$75,000 or more	48.0	4.4*	5.2*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)





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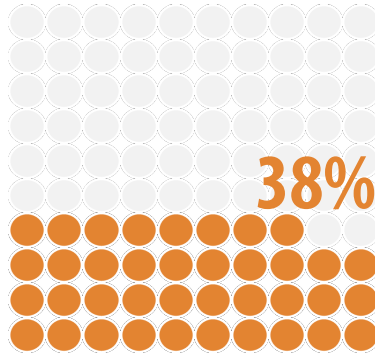
## Wisconsin

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

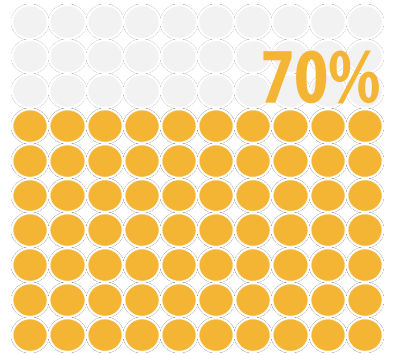
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

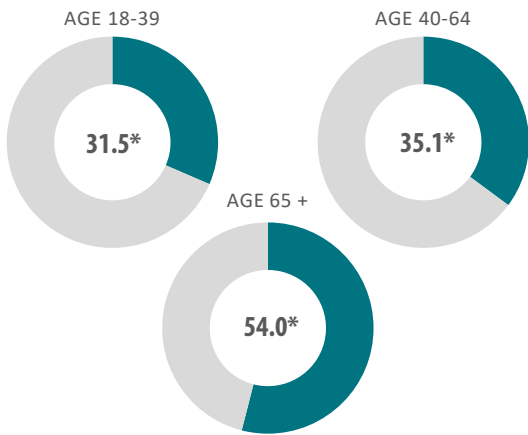
STATE RATE



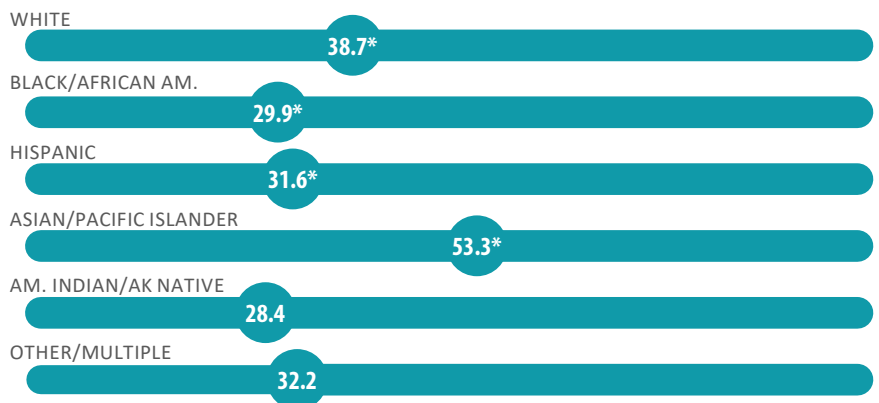
HERD IMMUNITY THRESHOLD



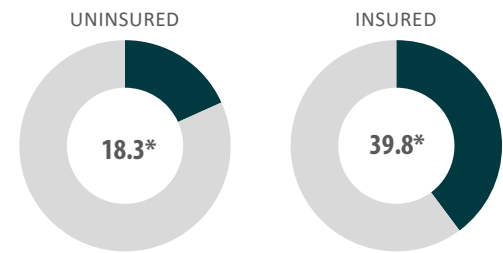
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status

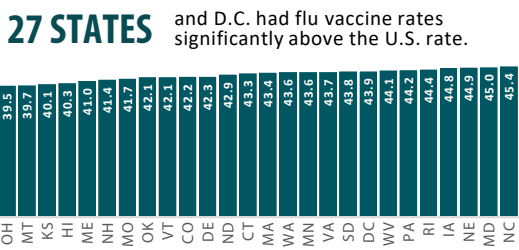
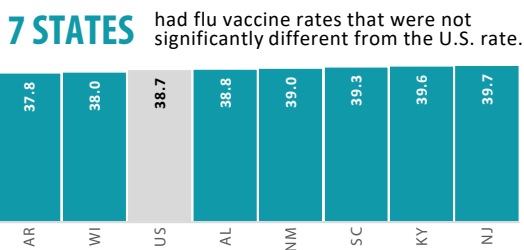
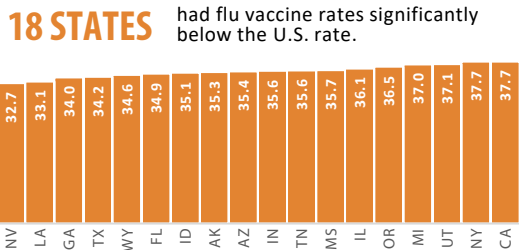


### Flu Vaccination Rates by Household Income

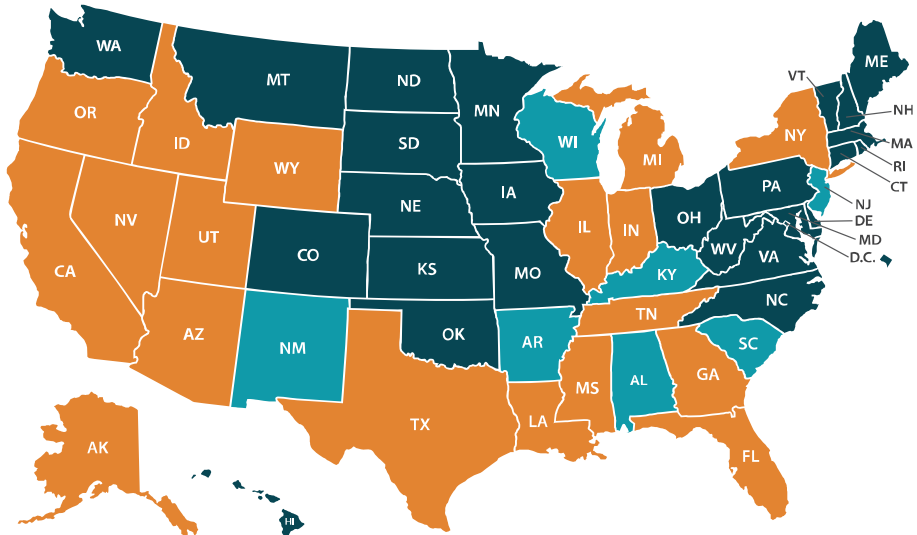


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Wisconsin	Wisconsin		United States		
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	38.0		-0.7	38.7	
<b>Age</b>					
18-39	31.5	-6.5*	3.0*	28.5	-10.2*
40-64	35.1	-2.9*	-2.0*	37.2	-1.5*
65+	54.0	16.0*	-5.4*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	38.7	0.7*	-3.0*	41.7	3.0*
Black/African American	29.9	-8.1*	-2.9	32.8	-5.9*
Hispanic	31.6	-6.4*	0.7	30.9	-7.7*
Asian/Pacific Islander	53.3	15.3*	11.9*	41.4	2.7*
American Indian/Alaska Native	28.4	-9.6	-5.5	33.9	-4.8*
Other/multiple	32.2	-5.9	-2.7	34.9	-3.8*
<b>Sex</b>					
Male	33.2	-4.8*	-2.2*	35.4	-3.3*
Female	42.5	4.4*	0.7	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	35.0	-3.0*	-0.4	35.4	-3.3*
1+ chronic conditions	48.7	10.7*	-0.4	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	18.3	-19.7*	0.7	17.6	-21.1*
Insured	39.8	1.8*	-1.8*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	18.5	-19.5*	-1.6	20.1	-18.6*
Has personal doctor	42.0	4.0*	-2.1*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
All Adults Age 25+	39.0		-1.2*	40.2	
Less than high school	31.3	-7.7*	-2.8	34.0	-6.1*
High school graduate	34.9	-4.1*	-0.6	35.6	-4.6*
Some college or associate's degree	36.0	-3.0*	-2.8*	38.8	-1.4*
Bachelor's degree or higher	48.8	12.8*	0.8	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	36.3	-1.7	1.6	34.8	-3.9*
\$25,000 to \$49,999	33.7	-4.3*	-2.8*	36.5	-2.2*
\$50,000 to \$74,999	35.5	-2.5*	-3.1*	38.6	-0.1
\$75,000 or more	43.0	5.0*	0.2	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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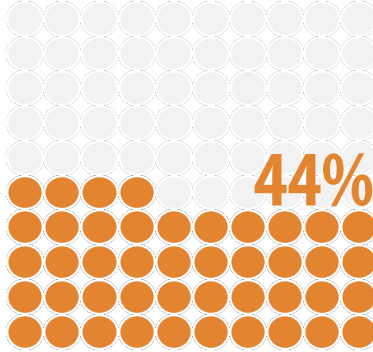
## West Virginia

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

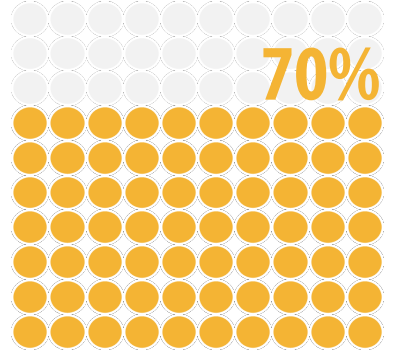
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### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

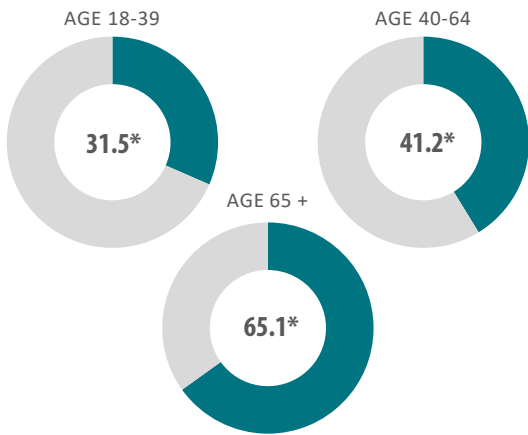
STATE RATE



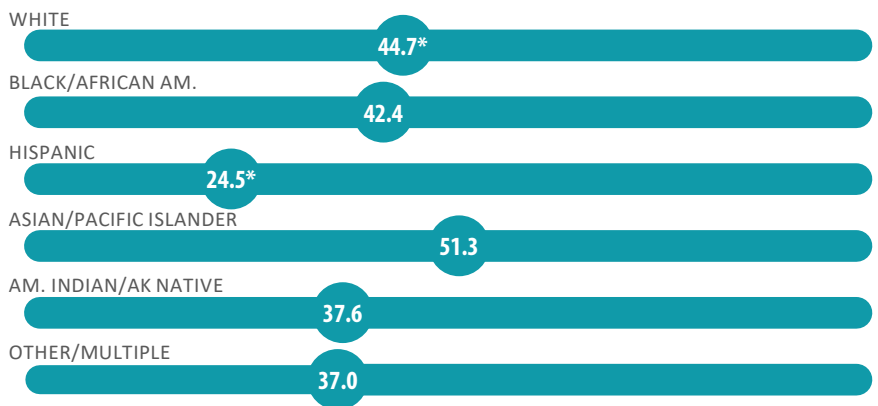
HERD IMMUNITY THRESHOLD



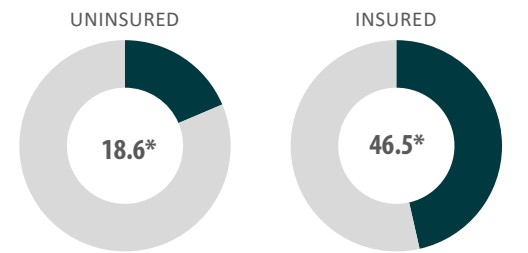
### Flu Vaccination Rates by Age



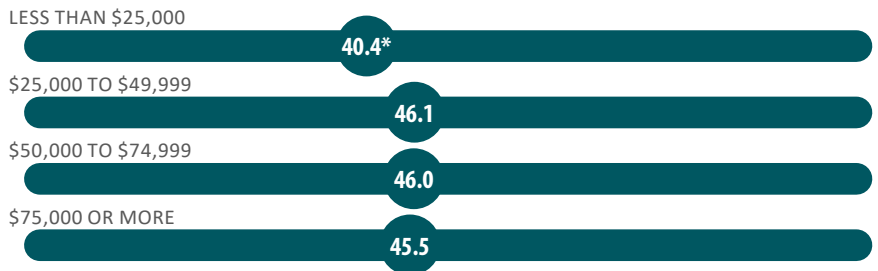
### Flu Vaccination Rates by Race/Ethnicity



### Flu Vaccination Rates by Insurance Status



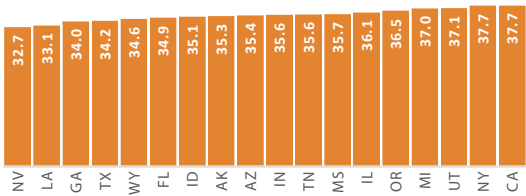
### Flu Vaccination Rates by Household Income



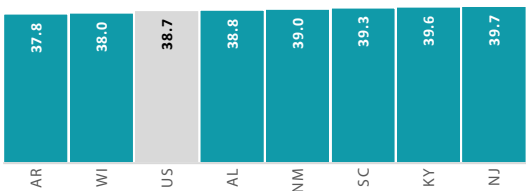
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates

**18 STATES** had flu vaccine rates significantly below the U.S. rate.



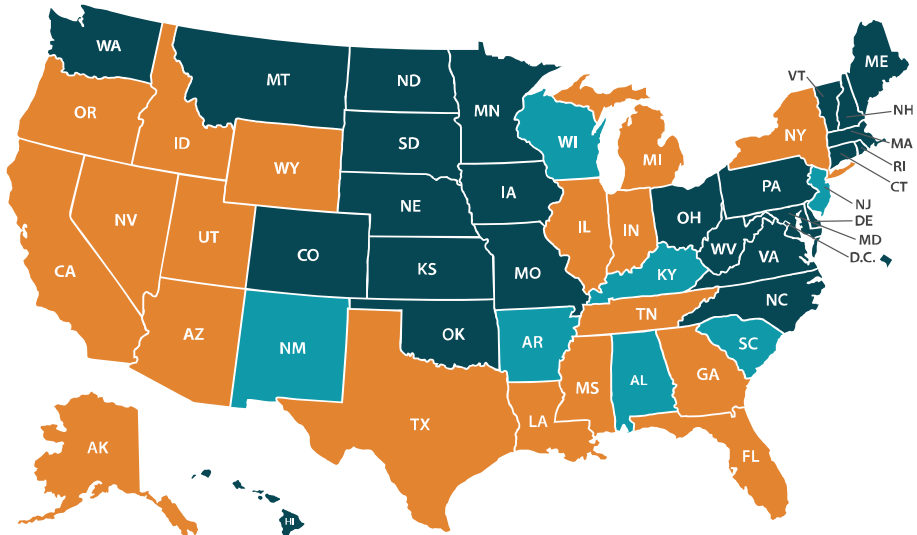
**7 STATES** had flu vaccine rates that were not significantly different from the U.S. rate.



**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate. Significantly above the U.S. rate. Not significantly different from the U.S. rate.



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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

West Virginia	West Virginia			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	44.1		5.4*	38.7	
<b>Age</b>					
18-39	31.5	-12.6*	3.0*	28.5	-10.2*
40-64	41.2	-2.9*	4.1*	37.2	-1.5*
65+	65.1	21.0*	5.7*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	44.7	0.6*	3.0*	41.7	3.0*
Black/African American	42.4	-1.7	9.6*	32.8	-5.9*
Hispanic	24.5	-19.6*	-6.4	30.9	-7.7*
Asian/Pacific Islander	51.3	7.2	9.9	41.4	2.7*
American Indian/Alaska Native	37.6	-6.5	3.7	33.9	-4.8*
Other/multiple	37.0	-7.1	2.2	34.9	-3.8*
<b>Sex</b>					
Male	39.8	-4.3*	4.5*	35.4	-3.3*
Female	48.2	4.1*	6.4*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	39.5	-4.6*	4.1*	35.4	-3.3*
1+ chronic conditions	53.7	9.6*	4.6*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	18.6	-25.5*	1.0	17.6	-21.1*
Insured	46.5	2.4*	4.9*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	19.4	-24.7*	-0.7	20.1	-18.6*
Has personal doctor	49.9	5.8*	5.8*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	45.2		5.0*	40.2	
Less than high school	42.6	-2.6	8.5*	34.0	-6.1*
High school graduate	41.8	-3.4*	6.2*	35.6	-4.6*
Some college or associate's degree	45.7	0.5	6.9*	38.8	-1.4*
Bachelor's degree or higher	53.1	7.4*	5.1*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	40.4	-3.7*	5.7*	34.8	-3.9*
\$25,000 to \$49,999	46.1	2.0	9.6*	36.5	-2.2*
\$50,000 to \$74,999	46.0	1.9	7.4*	38.6	-0.1
\$75,000 or more	45.5	1.4	2.7*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)



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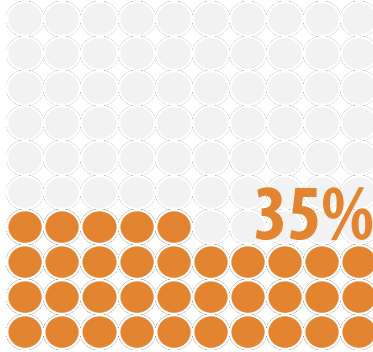
## Wyoming

Though there is no consensus on one singular figure needed to achieve what is commonly known as “herd immunity” (i.e., sufficient levels of COVID vaccinations in order to achieve protective population immunity) scientists and researchers have generally agreed on a range of 70-90% of the population being vaccinated. For simplicity, we use the lower end of the target range (70%) as a comparison for these state profiles.

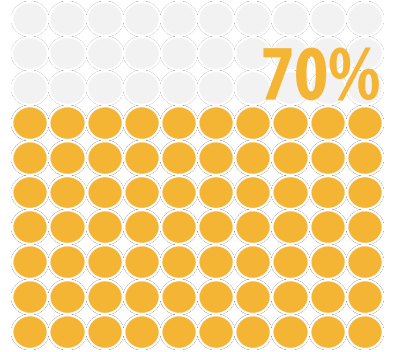
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder to reach with a COVID-19 vaccine.

### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

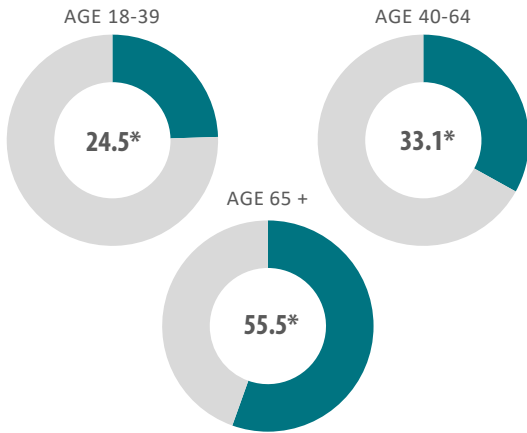
STATE RATE



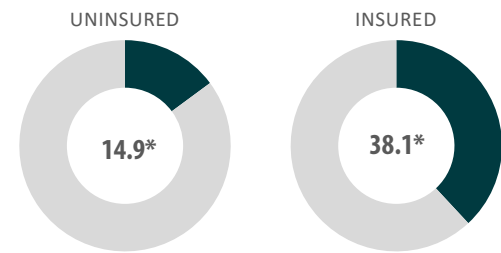
HERD IMMUNITY THRESHOLD



### Flu Vaccination Rates by Age



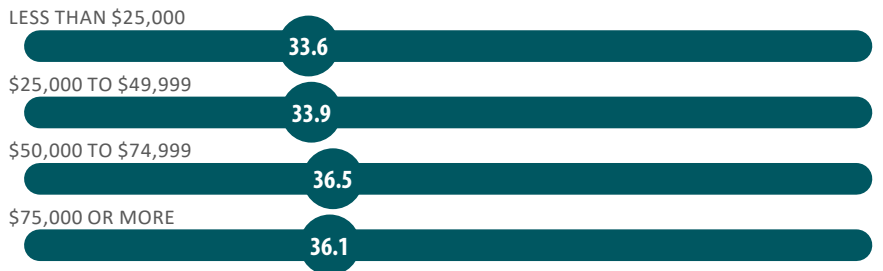
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

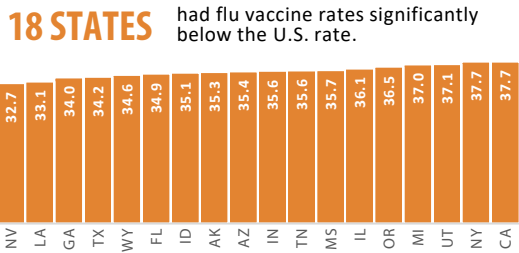


### Flu Vaccination Rates by Household Income

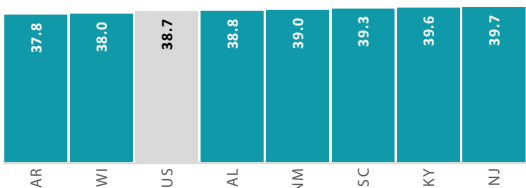


\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### State vs. National Adult Flu Vaccination Rates



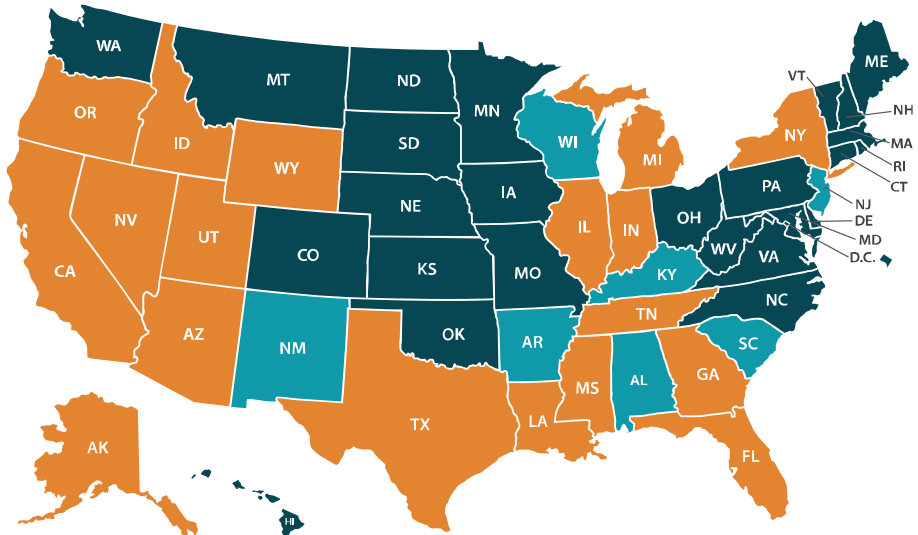
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# A STATE-LEVEL LOOK AT FLU VACCINATION RATES AMONG KEY POPULATION SUBGROUPS

SHADAC's analysis of 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) Data.

Wyoming	Wyoming			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
<b>All Adults Age 18+</b>	34.6		-4.1*	38.7	
<b>Age</b>					
18-39	24.5	-10.1*	-4.0*	28.5	-10.2*
40-64	33.1	-1.6*	-4.1*	37.2	-1.5*
65+	55.5	20.8*	-3.9*	59.4	20.7*
<b>Race/Ethnicity</b>					
White	35.0	0.4	-6.7*	41.7	3.0*
Black/African American	-	-	-	32.8	-5.9*
Hispanic	32.1	-2.5	1.1	30.9	-7.7*
Asian/Pacific Islander	-	-	-	41.4	2.7*
American Indian/Alaska Native	38.0	3.3	4.1	33.9	-4.8*
Other/multiple	33.5	-1.2	-1.4	34.9	-3.8*
<b>Sex</b>					
Male	31.1	-3.6*	-4.3*	35.4	-3.3*
Female	38.4	3.8*	-3.4*	41.8	3.1*
<b>Chronic Condition Status</b>					
No chronic conditions	31.4	-3.2*	-4.0*	35.4	-3.3*
1+ chronic conditions	46.5	11.9*	-2.6*	49.1	10.5*
<b>Health Insurance Coverage</b>					
Uninsured	14.9	-19.7*	-2.7*	17.6	-21.1*
Insured	38.1	3.5*	-3.5*	41.6	2.9*
<b>Access to Care</b>					
No personal doctor	19.1	-15.5*	-1.0	20.1	-18.6*
Has personal doctor	41.9	7.2*	-2.2*	44.1	5.4*
<b>Educational Attainment (Age 25+)</b>					
<i>All Adults Age 25+</i>	36.0		-4.2*	40.2	
Less than high school	26.0	-10.0*	-8.0*	34.0	-6.1*
High school graduate	31.1	-4.9*	-4.5*	35.6	-4.6*
Some college or associate's degree	35.4	-0.6	-3.4*	38.8	-1.4*
Bachelor's degree or higher	44.7	9.4*	-3.2*	47.9	9.2*
<b>Household Income</b>					
Less than \$25,000	33.6	-1.0	-1.2	34.8	-3.9*
\$25,000 to \$49,999	33.9	-0.7	-2.6*	36.5	-2.2*
\$50,000 to \$74,999	36.5	1.8	-2.1	38.6	-0.1
\$75,000 or more	36.1	1.5	-6.7*	42.8	4.1*

Notes: Adults defined as 18 years of age and above, except where explicitly noted under the educational attainment. All differences are statistically significant at the 95% confidence level. Source: SHADAC analysis of the 2017-2019 Behavioral Risk Factor Surveillance System (BRFSS) public use files on [statehealthcompare.shadac.org](http://statehealthcompare.shadac.org)