



# 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.

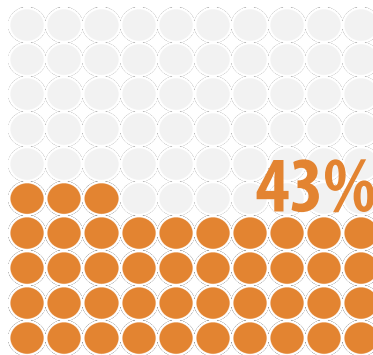
## Massachusetts

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.

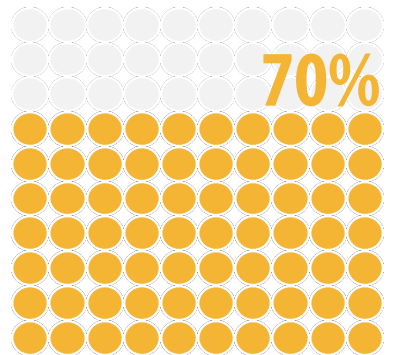
### State Flu Vaccination Rate vs. COVID-19 Herd Immunity Threshold

STATE RATE



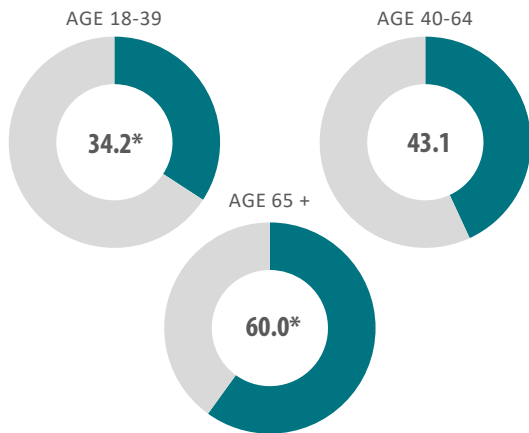
43%

HERD IMMUNITY THRESHOLD

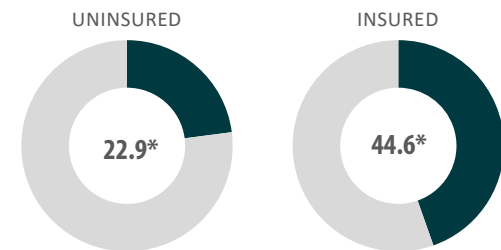


70%

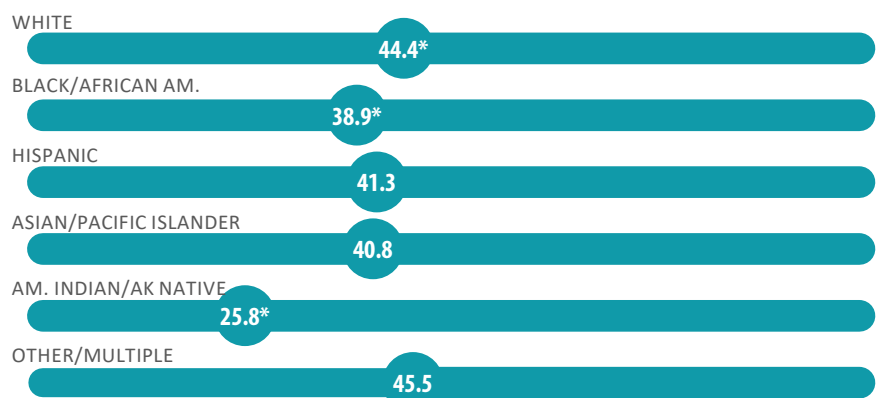
### Flu Vaccination Rates by Age



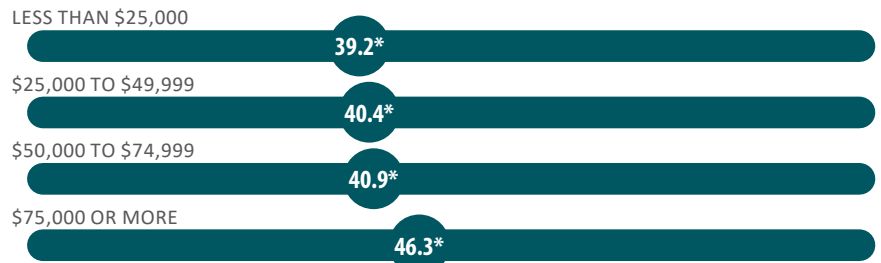
### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity



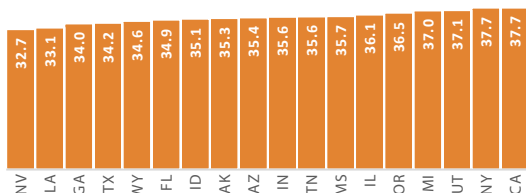
### Flu Vaccination Rates by Household Income



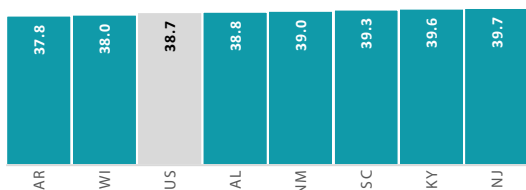
\* Significantly different from the statewide rate (adults age 18+) at 95% confidence level.

### 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.



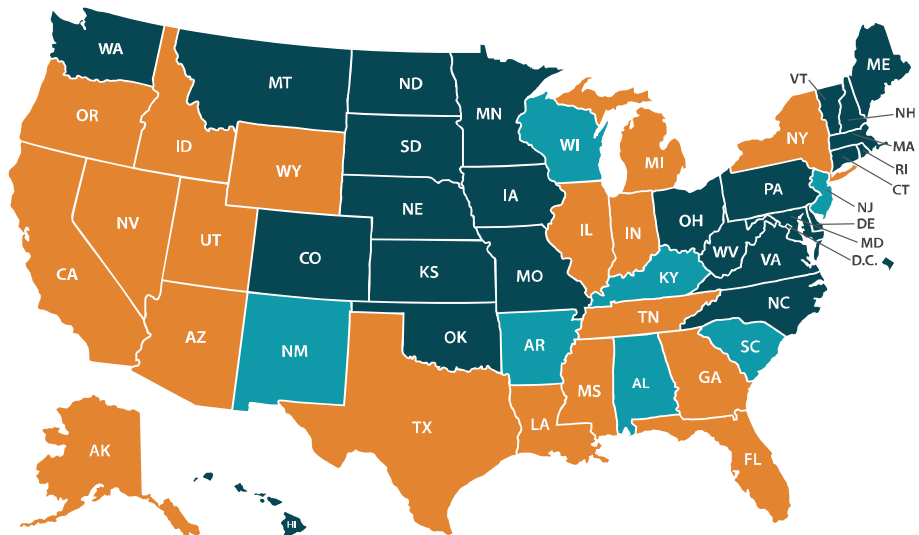
**27 STATES** and D.C. had flu vaccine rates significantly above the U.S. rate.



Significantly below the U.S. rate.

Significantly above the U.S. rate.

Not significantly different from the U.S. rate.



[CLICK HERE](#)

to access SHADAC's related brief: *Anticipating COVID-19 Vaccination Challenges through Flu Vaccination Patterns*

[CLICK HERE](#)

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





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Massachusetts	Massachusetts			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
All Adults Age 18+	43.4		4.8*	38.7	
Age					
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*
Race/Ethnicity					
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*
Sex					
Male	39.6	-3.9*	4.2*	35.4	-3.3*
Female	46.7	3.3*	4.9*	41.8	3.1*
Chronic Condition Status					
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*
Health Insurance Coverage					
Uninsured	22.9	-20.5*	5.4*	17.6	-21.1*
Insured	44.6	1.2*	3.0*	41.6	2.9*
Access to Care					
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*
Educational Attainment (Age 25+)					
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*
Household Income					
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](https://statehealthcompare.shadac.org)