



# 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.

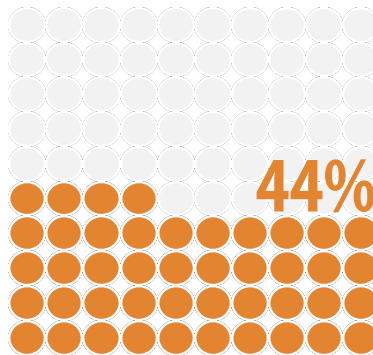
## Pennsylvania

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.

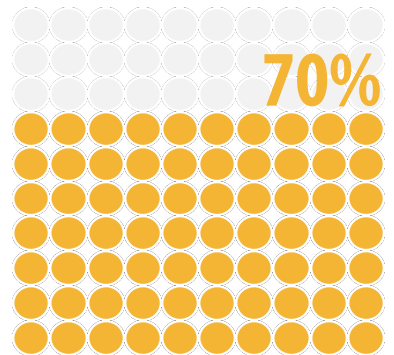
Using data from the U.S. Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) survey, these profiles give a deeper look into flu vaccination rates across the states among U.S. adults (age 18+) as a proxy to identify population subgroups that may be harder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

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

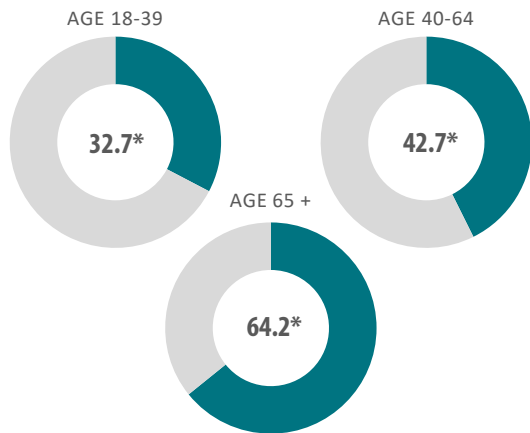
STATE RATE



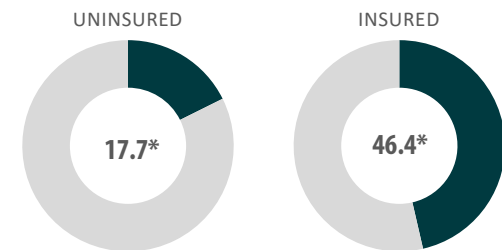
HERD IMMUNITY THRESHOLD



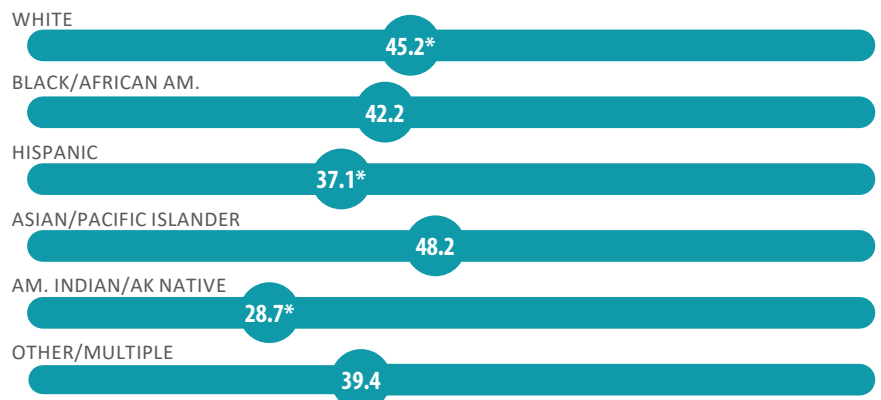
### Flu Vaccination Rates by Age



### Flu Vaccination Rates by Insurance Status



### Flu Vaccination Rates by Race/Ethnicity

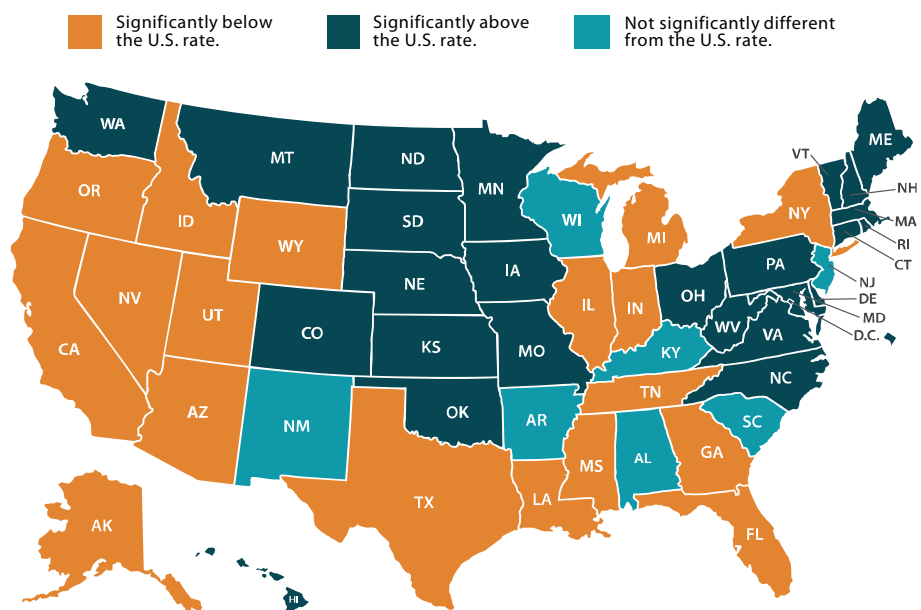
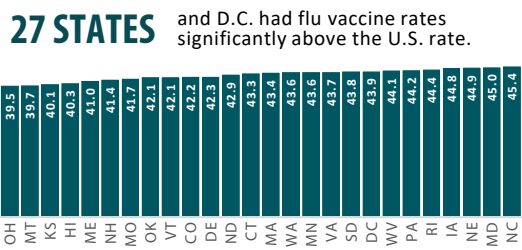
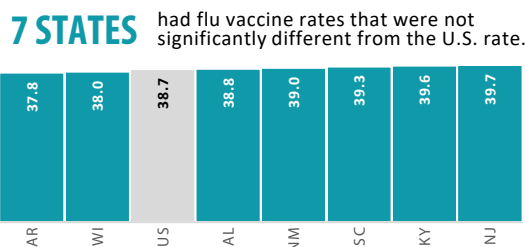
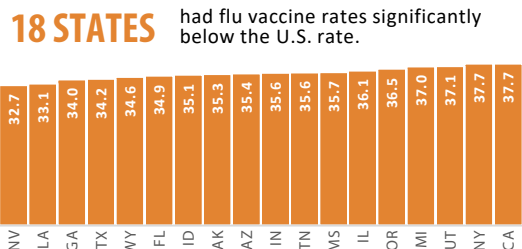


### Flu Vaccination Rates by Household Income



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

### State vs. National Adult Flu Vaccination Rates



[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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Pennsylvania	Pennsylvania			United States	
	Percent	Diff. from All Adults	Diff. from U.S. rate	Percent	Diff. from All Adults
All Adults Age 18+	44.2		5.6*	38.7	
Age					
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*
Race/Ethnicity					
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*
Sex					
Male	39.8	-4.5*	4.4*	35.4	-3.3*
Female	48.4	4.2*	6.6*	41.8	3.1*
Chronic Condition Status					
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*
Health Insurance Coverage					
Uninsured	17.7	-26.6*	0.1	17.6	-21.1*
Insured	46.4	2.2*	4.8*	41.6	2.9*
Access to Care					
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*
Educational Attainment (Age 25+)					
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*
Household Income					
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](https://statehealthcompare.shadac.org)