

# A True Cost of Health Care in the United States in 2018

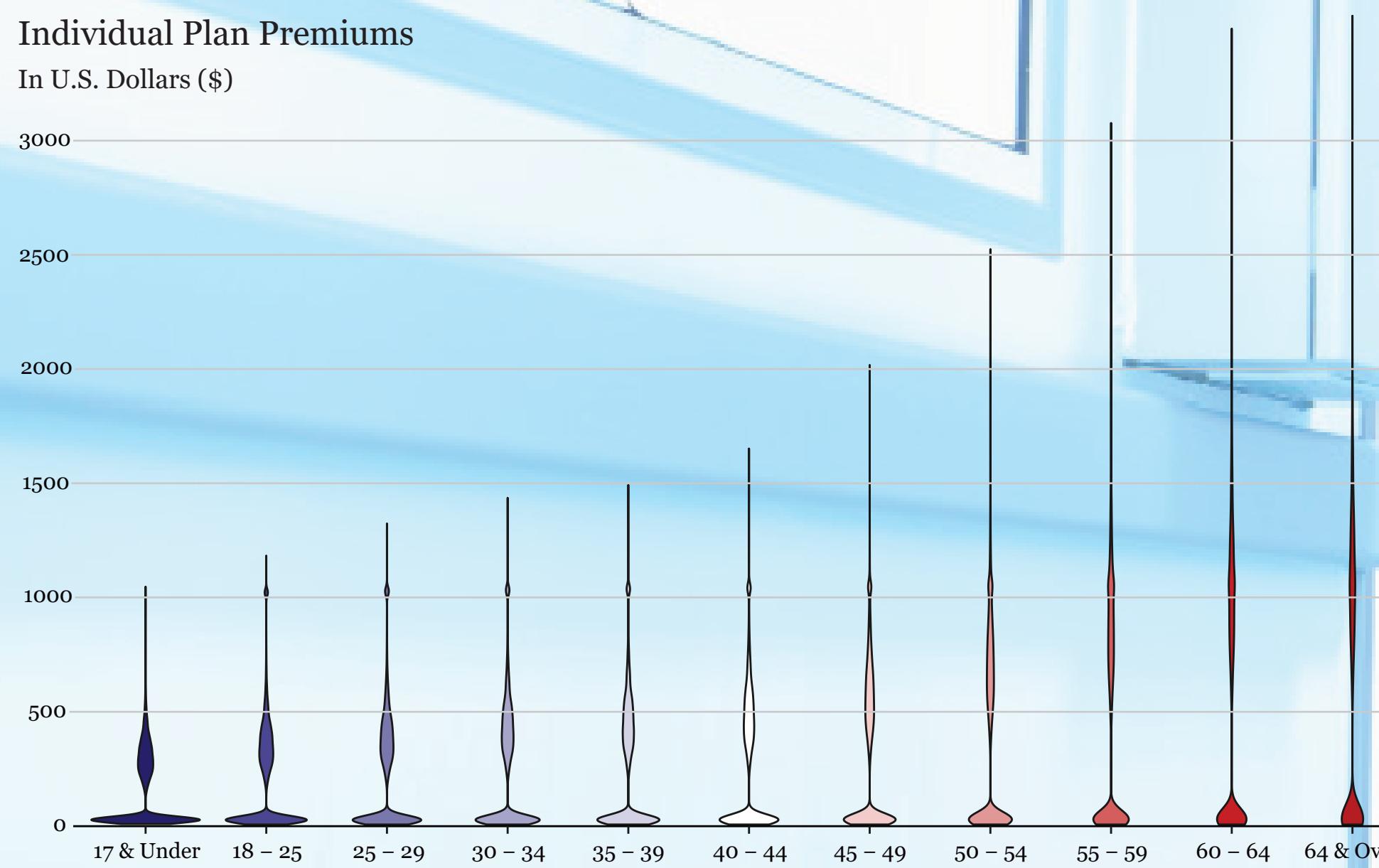
## MOTIVATION:

Health care and its associated cost are at the forefront of the American public consciousness.

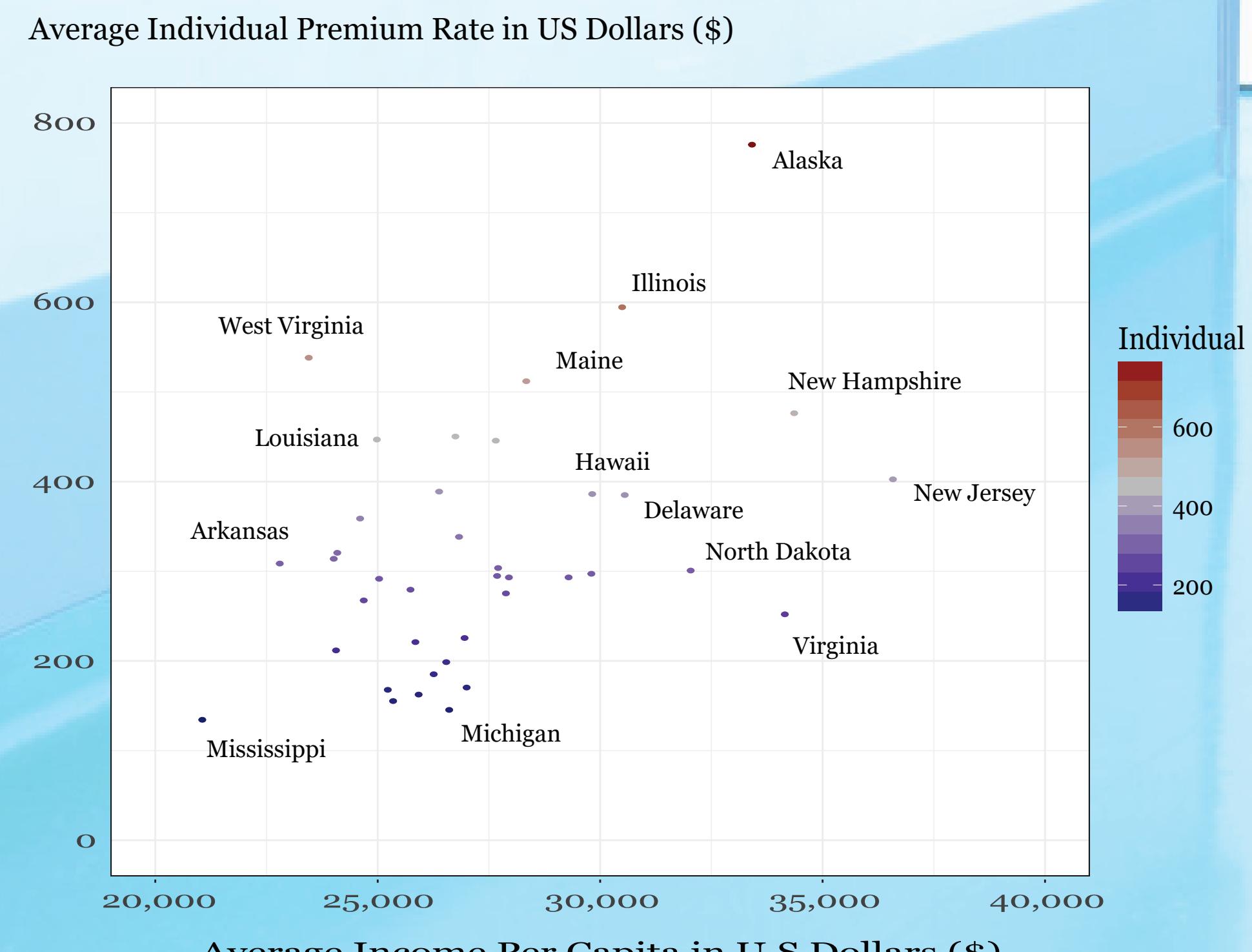
As the political debate continues surrounding health care coverage and its associated costs millions of Americans are affected in their pocketbooks in addition to their well-being.

With a wide variety of people comprising the America population finding health care coverage that is both comprehensive and affordable is a challenge faced by many.

As one might expect the cost of health care steadily rises as a person ages as indicated in the below violin plot highlighting the average individual plan premiums based on different age categories.



Based on the scatter plot below a somewhat linear relationship can be seen when it come to the average individual premium rates and average income per capita. As income increases in general we see increases in health insurance premiums.

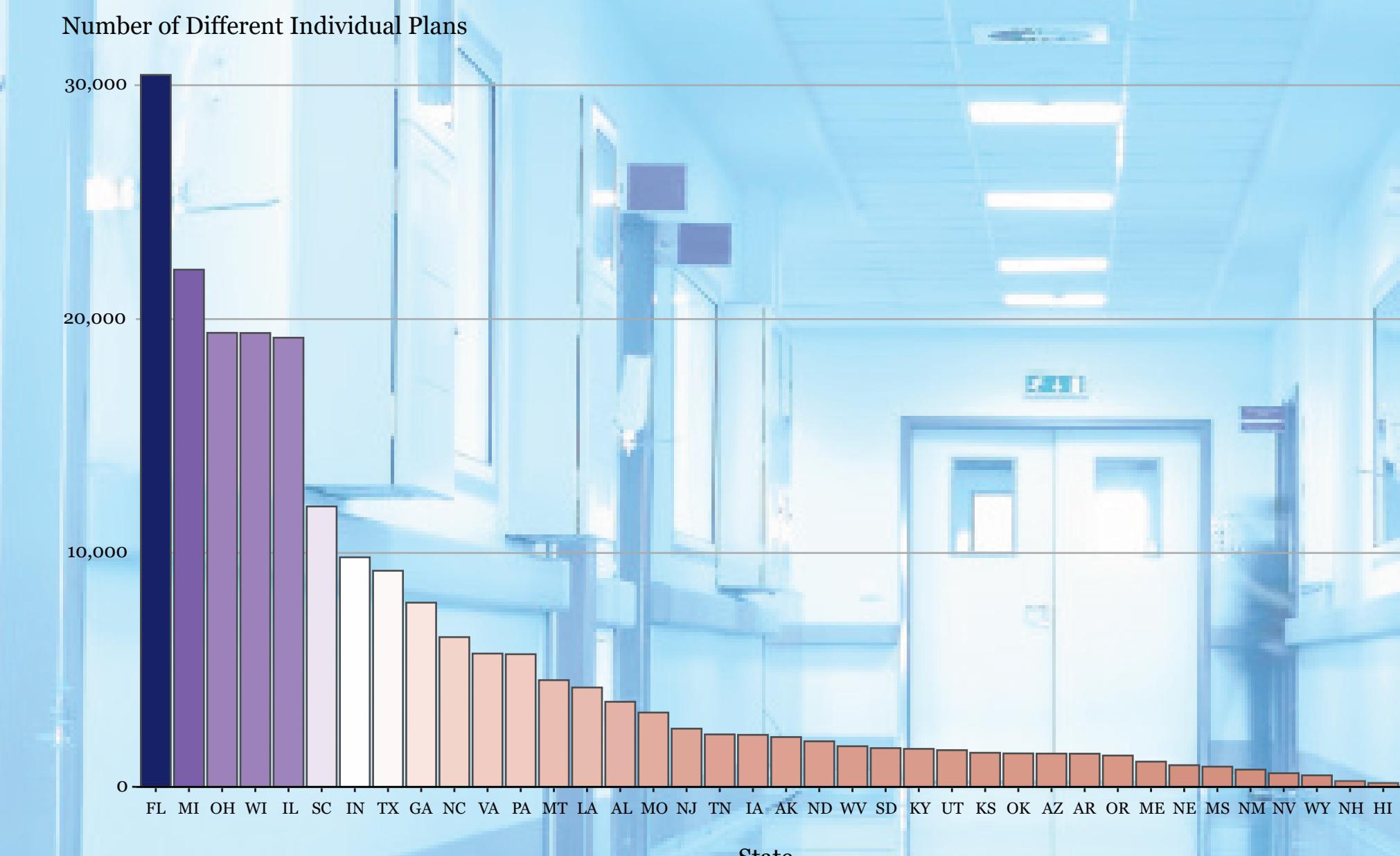


## QUESTIONS:

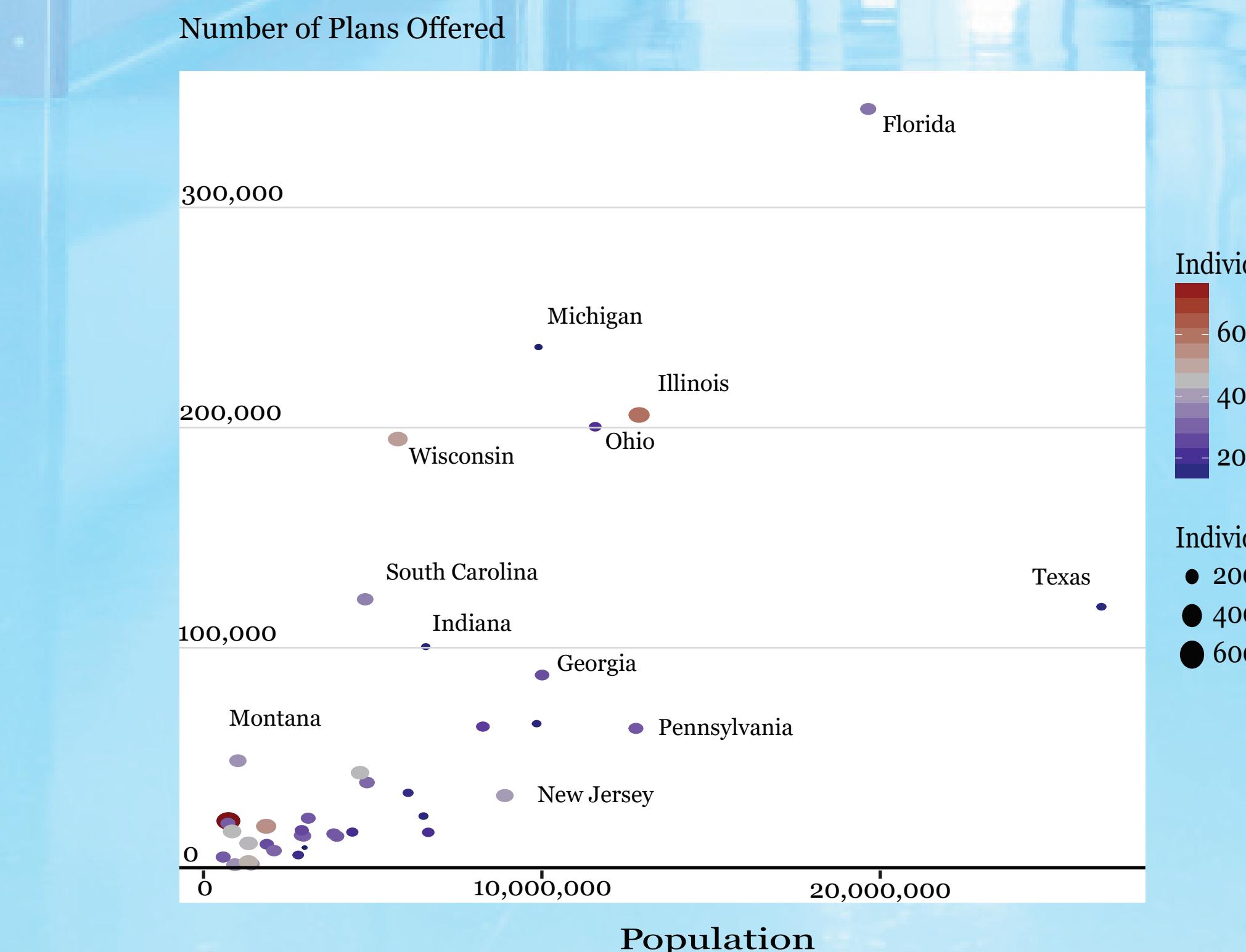
How can the state in which one resides effect the options and costs associated with health care and what might play a role in that?

Can health care costs be related to income levels of prospective plan purchasers?

When looking at the different coverage plans offered in each state, we can see a large difference from the options a consumer has to pick from when they live in different states. For a person living in Florida finding a plan that fit their needs might be easy while the limited options in Delaware might have someone selecting an ill-fitting plan.



An intuitive relationship can be seen when it comes to the number of plan options offered in each state when compared to populations. With a greater number of people in a state we see the options increase in general.



## THE DATA:

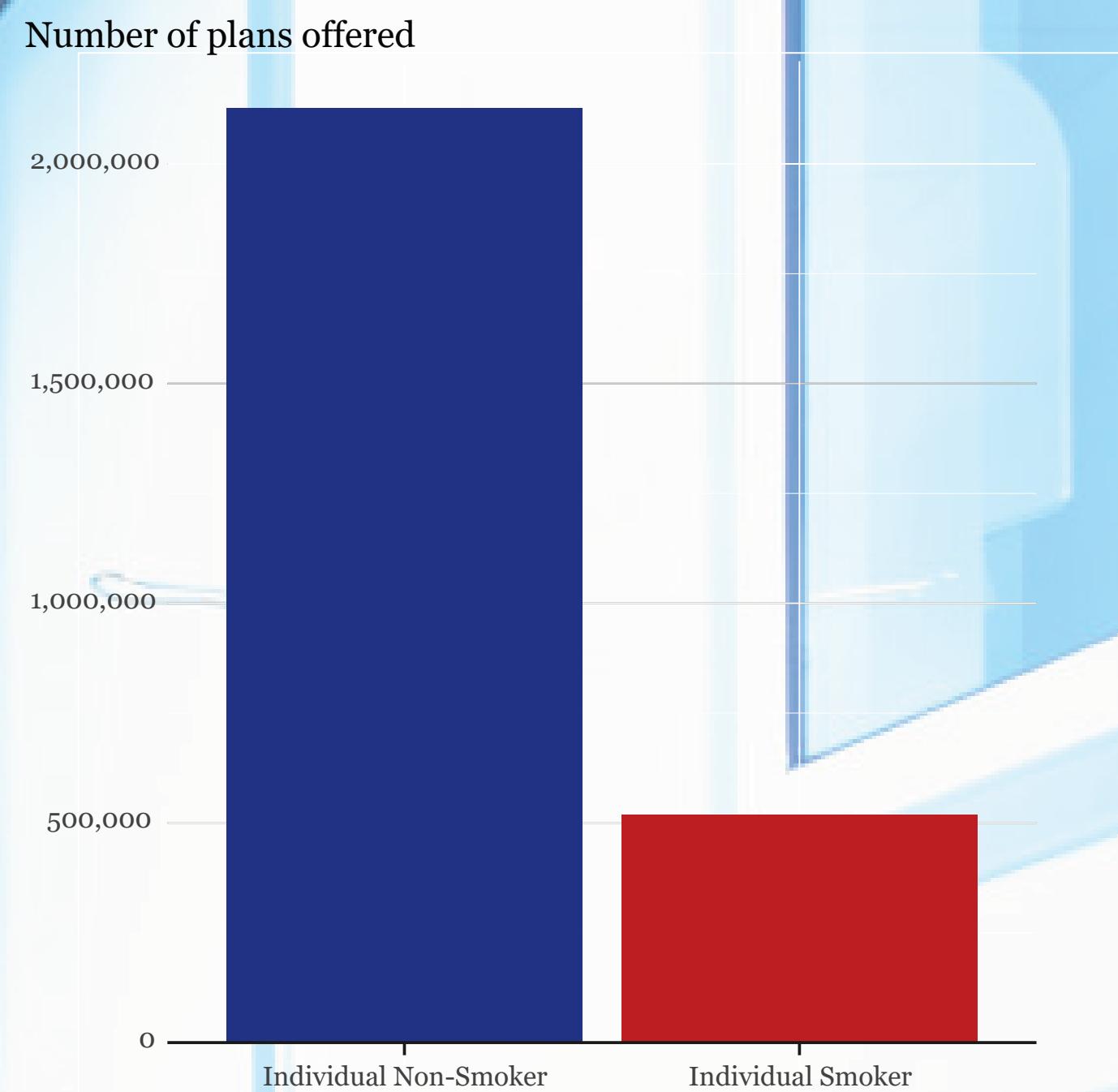
Anthem, the health insurance provider, supplied health insurance plan rates based on a subscriber's age, tobacco use, geographic location and family-tier rates totaling 2,287,807 rows and 11 columns for a google challenge.

This data was supplemented with U.S. Census data from Kaggle.com to obtain population and income data.

Outliers were removed from the dataset by locating plans that had premium rates of \$0 and \$9,999, binning of plans by ages, and aggregation of the average plan cost, average income per capita, and total population done.

## Plan Options Smoker vs. Non-Smoker

As smoking rates continue to decline so do the options available to smokers



## Average Premium for Individual Rate Plans in the U.S. in 2018

Like many things in the United States the cost of health care is also something that can vary greatly from one state to another as we see a range of average individual health care plan premiums with lows around \$135 a month to highs of \$775 a month.

