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A REPORT ON HEALTH CARE ACCESS BY UNITED STATES CITIZENS FROM 2015 – 2018

Introduction

The National Health Interview Survey (NHIS) has been monitoring the health of the United States citizens since 1957. The United States Census Bureau has been the data collection agent for NHIS. The data on a broad range is collected through personal household interviews. The survey results have been useful in tracking of health status, health care access and progress towards achieving national health objectives.

Data Description

The National Health Interview Survey (NHIS) has been collecting five core data files every year, that is, family file, household file, person file, sample child file and sample audit file. This project focused on family data files from 2015 – 2018. The family data files majorly focused on health care access and utilization and additional supplemental questions on food security. These data files have an interesting story on how easy United States citizens access health care. The dataset has 127 variables. Six variables that would help tell the above mentioned story were selected. These are;

i. SRVY_YR   - Survey Year
ii. FNMEDYN   - Could not afford medical care. Exclusive of dental care
iii. FHICOST   - Health care cost. Excludes health insurance premiums, over the counter drugs or other costs that will be reimbursed
iv. FMEDBILL   - Problems paying or unable to pay any medical bills
v. FHICOVYN   - Any family member has health care coverage
vi. FHICOVCT   - Number of family members with health care coverage

Analysis and Results Interpretation

Illness is unpredictable. For easier access to health care services, health care coverage plays a big role. It lowers the medical bills to the affected individual. Families try their level best to ensure that at least one of their family members has a health care coverage. This guarantees them of subsidized medical bills if one of them falls sick. From 2015 – 2018, a good number of families registered that at least one of their family member had a health care coverage. The figure below shows that most of the families had at least one family member with a health care coverage.
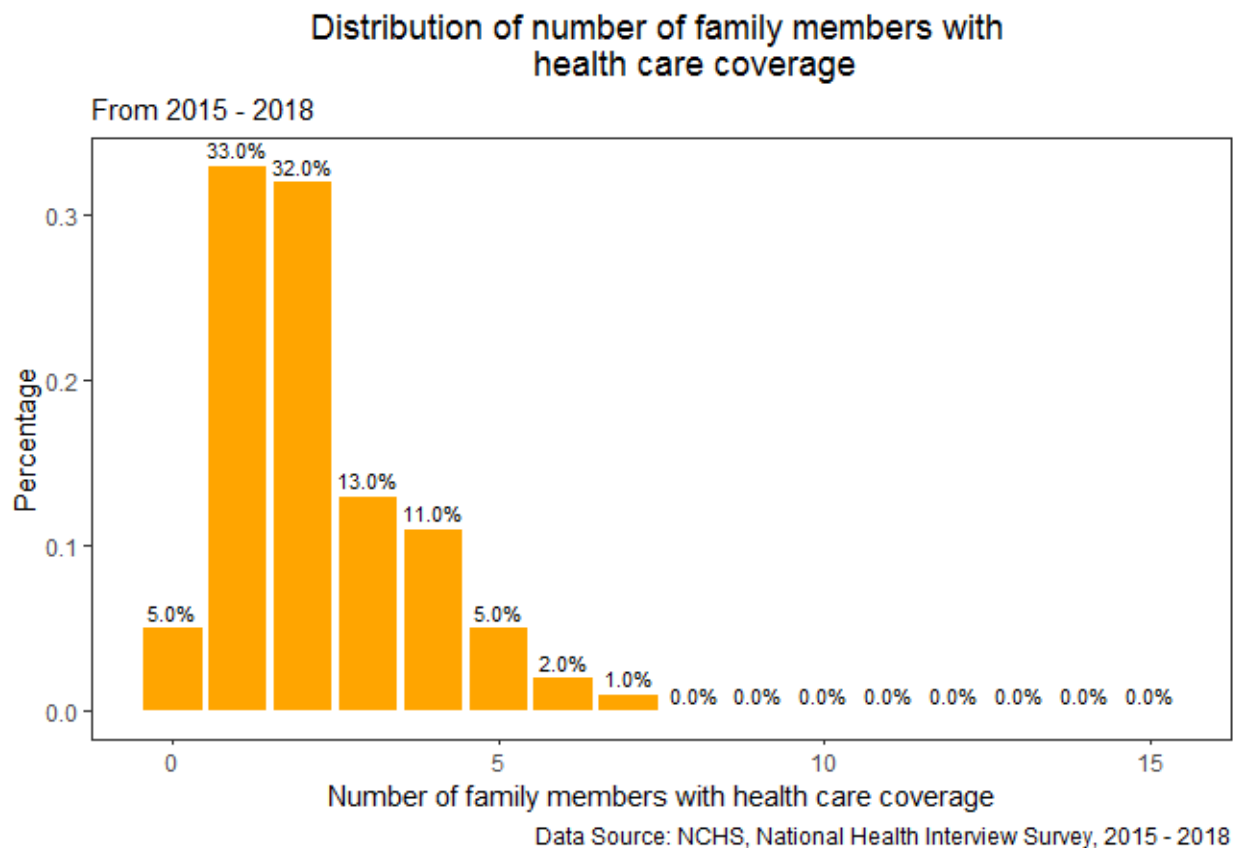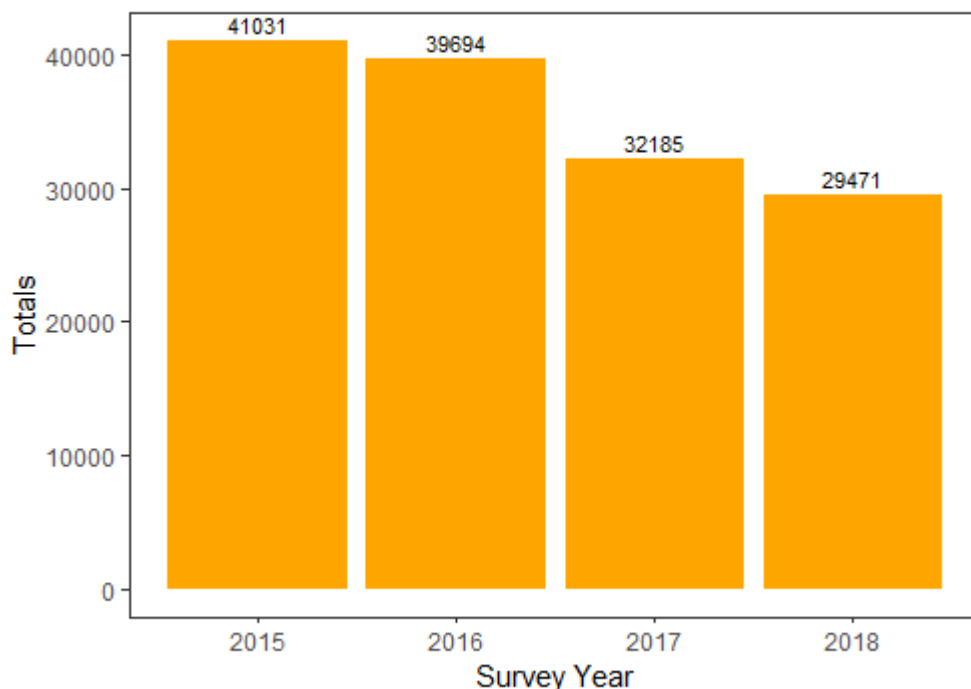

Figure 1: Health care coverage distribution

The distribution shows that more than 60% of the families in United States that were interviewed, had at least one member with a health care coverage. This is an implication that most families could easily access health care services. We may want to find out whether there has been a variation in the number of health care coverage across the four years. The chart bellows shows total number of family members with health care coverage.

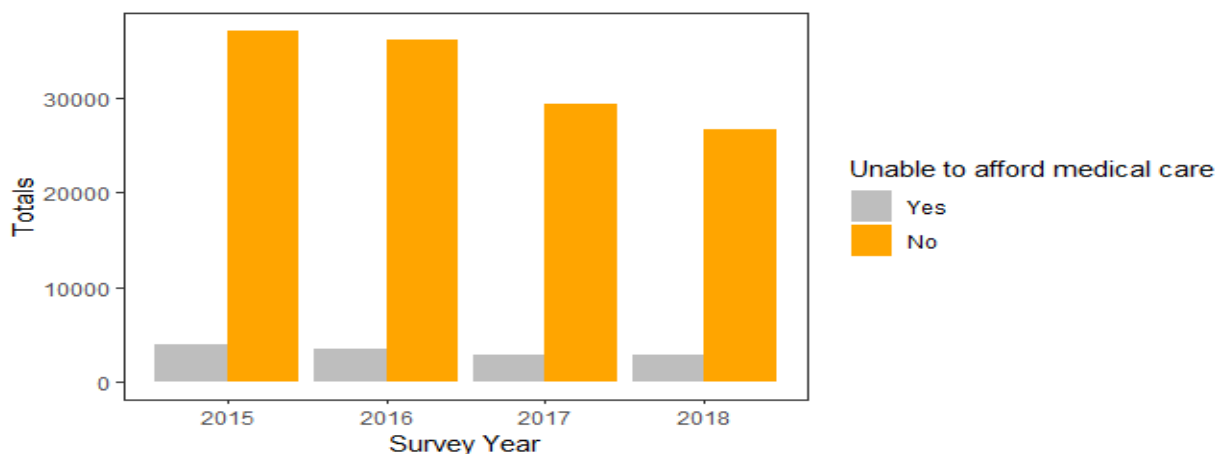## Number of family members with health care coverage
From 2015 - 2018

Figure 2: Number of family members with health care coverage

The above figure clearly shows variations in number of family members with health care coverage across the four years. The number was reducing from 2015 to 2018. National Health Center for Statistics may want to find out why the numbers were reducing. But, one thing is that the numbers are still high which shows preparedness of unprecedented cases. But, does having health care coverage imply most families were able to afford access to health care services? The chart below shows the distribution of health care affordability.

Medical care affordability
From 2015 - 2018

Figure 3: Affordability to medical care across four years

From the bar chart, it's clear that in United States, most of the families were able to afford medical care across the four years. The high number could be as a result of having most families with at least one member with health care coverage. There could be other reasons that contributes to the above results as well, but we can find out whether having health care coverage truly contributes to medical care affordability. This can be viewed in different years in order to make a concrete judgement. The chart below shows a heatmap of having a health care coverage and medical care affordability faceted by years.
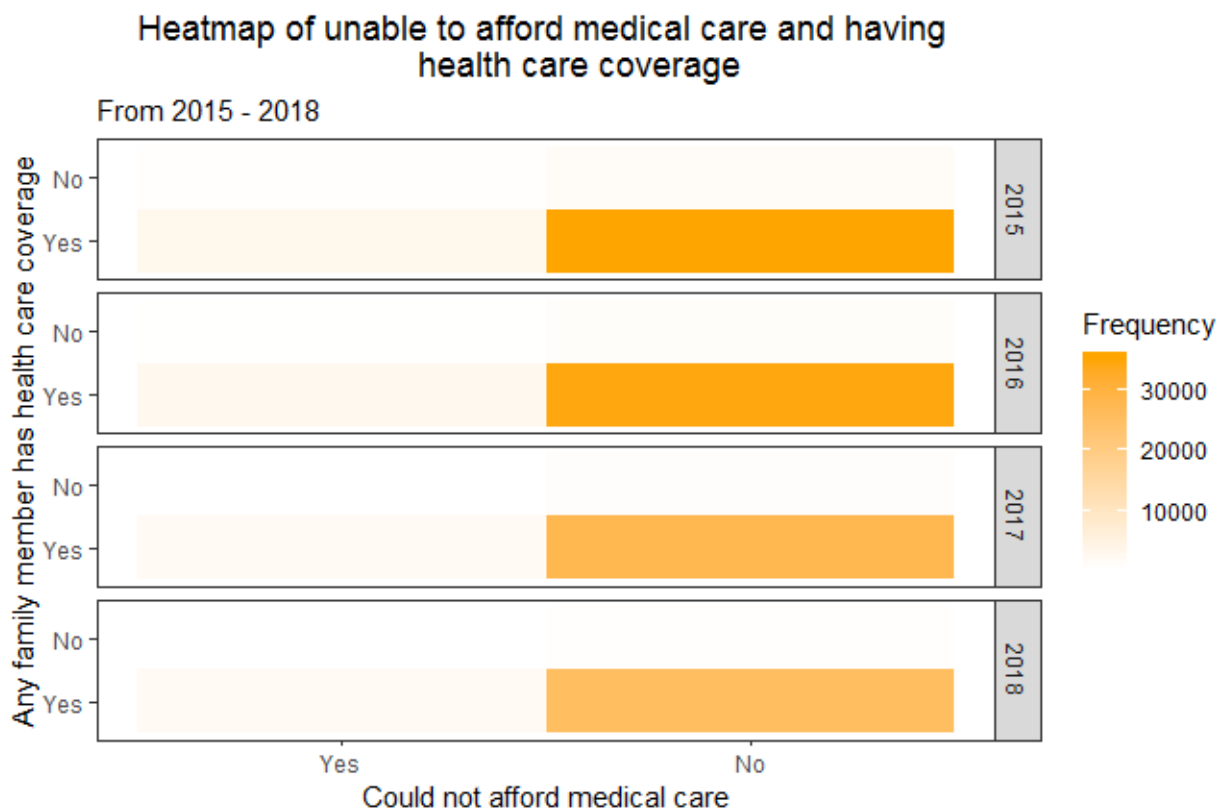

Figure 4: Heatmap of medical care affordability and health care coverage

We have no doubt now that having health care coverage makes medical care affordable. Figure 4 above clearly shows that most families that afforded medical care had at least a member of the family with health care coverage. Most families were able to afford medical care in 2015 compared to 2018. This is evidenced by the color saturation across the years. We can also see that all families that had no family member with health care coverage, were unable to afford medical care. This confirms that having a health care coverage truly makes medical care affordable to most of the families. What we may want to know is, does having health care coverage reduce health care cost? The mosaic plot below will help us answer this question.
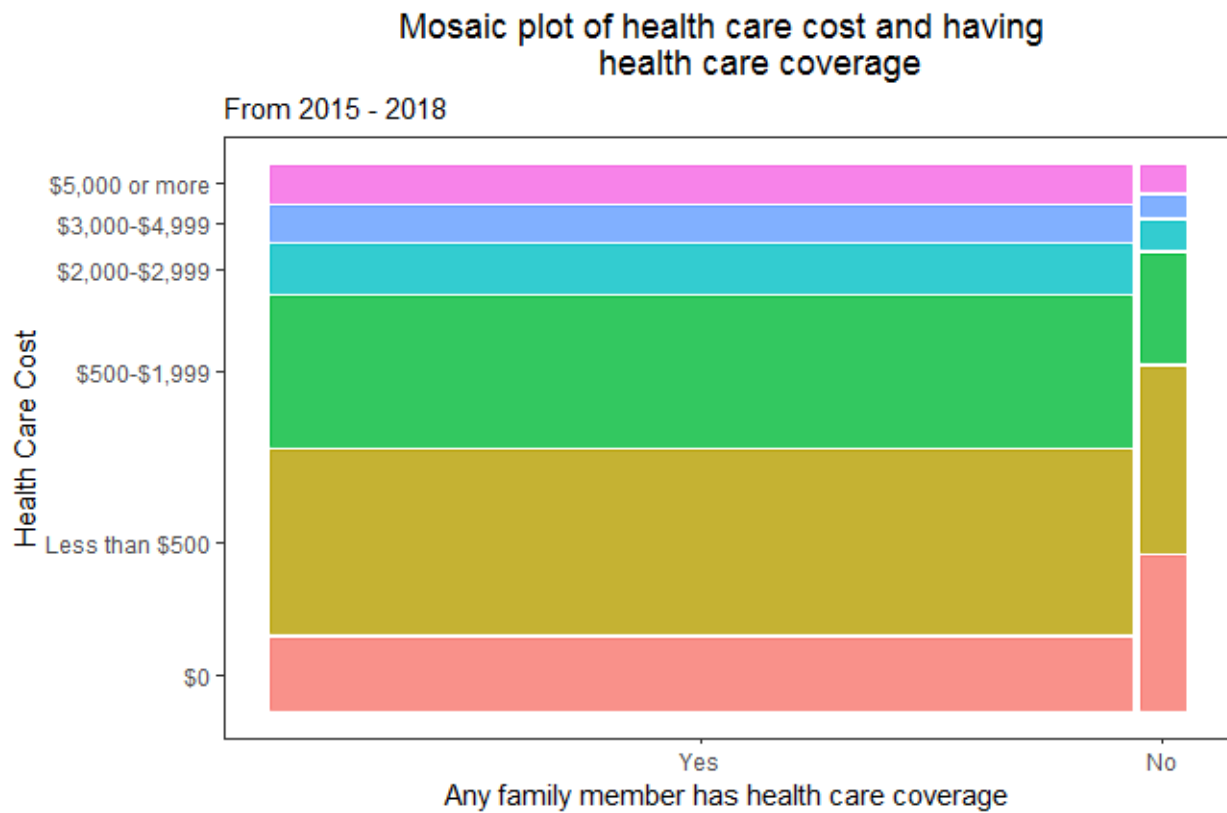
Figure 5: Health care cost verses any family member has health care coverage

The mosaic plot shows that most of the families that had a member with health care coverage, spent less than $500 on health care cost. The second largest group spent $500 - $1,999 on health care when they had a family member with health care coverage.

Therefore, we can conclude that in United States, citizens with health care coverage can easily access health care. The story is coming out clear that health care coverage is playing a key role in health care access. We would recommend each individual/family to get a health care coverage. The visualizations have shown that having health care coverage reduces health care cost and increases affordability to medical care.