

# Pattern of Smoking Prevalence across different Sub-population in the United States for year 2018

11/13/2020

## Building the survey design using survey weights

```
nhis18_design <- svydesign(id=~PPSU, strata= ~PSTRAT, nest = TRUE,
                          weights = ~WTFA_SA, data = nhis18)
summary(nhis18_design)
```

## Smoking Prevalence by Age

Table 1: Table Showing Smoking by Age and Type of Product

| binned_age | Type of Smoke     | No       | Yes      | Prevalence (%) |
|------------|-------------------|----------|----------|----------------|
| 18-24      | Cigarette         | 26888666 | 2272272  | 7.8            |
| 25-44      | Cigarette         | 71443919 | 14084941 | 16.5           |
| 45-64      | Cigarette         | 69300202 | 13474015 | 16.3           |
| 65+        | Cigarette         | 46923769 | 4322972  | 8.4            |
| 18-24      | E-cigarette       | 26930207 | 2218603  | 7.6            |
| 25-44      | E-cigarette       | 81928534 | 3641402  | 4.3            |
| 45-64      | E-cigarette       | 81083537 | 1776898  | 2.1            |
| 65+        | E-cigarette       | 50826151 | 428595   | 0.8            |
| 18-24      | Cigar             | 27926661 | 1196646  | 4.1            |
| 25-44      | Cigar             | 81284369 | 4259921  | 5.0            |
| 45-64      | Cigar             | 79758852 | 3060628  | 3.7            |
| 65+        | Cigar             | 50100019 | 1075252  | 2.1            |
| 18-24      | Pipe              | 28659681 | 510966   | 1.8            |
| 25-44      | Pipe              | 84259454 | 1243429  | 1.5            |
| 45-64      | Pipe              | 82288643 | 524728   | 0.6            |
| 65+        | Pipe              | 50951439 | 302031   | 0.6            |
| 18-24      | Smokeless Tobacco | 28702194 | 468453   | 1.6            |
| 25-44      | Smokeless Tobacco | 82840950 | 2711923  | 3.2            |
| 45-64      | Smokeless Tobacco | 80869227 | 1991346  | 2.4            |
| 65+        | Smokeless Tobacco | 50537130 | 706928   | 1.4            |

## Smoking Prevalence by Gender

Table 2: Table Showing Prevalence of Smoking by Sex and Type of Product

| SEX   | Type of Smoke     | No        | Yes      | Prevalence (%) |
|-------|-------------------|-----------|----------|----------------|
| Men   | Cigarette         | 101235981 | 18757787 | 15.6           |
| Women | Cigarette         | 113320575 | 15396413 | 12.0           |
| Men   | E-cigarette       | 114955592 | 5148433  | 4.3            |
| Women | E-cigarette       | 125812837 | 2917065  | 2.3            |
| Men   | Cigar             | 111815610 | 8202481  | 6.8            |
| Women | Cigar             | 127254291 | 1389966  | 1.1            |
| Men   | Pipe              | 118186125 | 1850701  | 1.5            |
| Women | Pipe              | 127973092 | 730453   | 0.6            |
| Men   | Smokeless Tobacco | 114514254 | 5590813  | 4.7            |
| Women | Smokeless Tobacco | 128435247 | 287837   | 0.2            |

## Smoking Prevalence by Race/Ethnicity

Table 3: Smoking Prevalence by Race and type of Smoke

| RACERPI2               | Type of Smoke     | No        | Yes      | Prevalence (%) |
|------------------------|-------------------|-----------|----------|----------------|
| AIAN                   | Cigarette         | 2131366   | 661679   | 23.7           |
| Asian                  | Cigarette         | 14818633  | 1107795  | 7.0            |
| Black/African American | Cigarette         | 26263315  | 4447668  | 14.5           |
| Multiple               | Cigarette         | 4797069   | 959601   | 16.7           |
| white                  | Cigarette         | 165996887 | 26886853 | 13.9           |
| AIAN                   | E-Cigarette       | 2685066   | 107979   | 3.9            |
| Asian                  | E-Cigarette       | 15557891  | 353144   | 2.2            |
| Black/African American | E-Cigarette       | 30159227  | 570361   | 1.9            |
| Multiple               | E-Cigarette       | 5422037   | 334633   | 5.8            |
| white                  | E-Cigarette       | 186351012 | 6652687  | 3.4            |
| AIAN                   | Cigar             | 2673509   | 119536   | 4.3            |
| Asian                  | Cigar             | 15616288  | 242386   | 1.5            |
| Black/African American | Cigar             | 29241812  | 1488887  | 4.8            |
| Multiple               | Cigar             | 5486640   | 270030   | 4.7            |
| white                  | Cigar             | 185445501 | 7437869  | 3.9            |
| AIAN                   | Pipe              | 2767197   | 25848    | 0.9            |
| Asian                  | Pipe              | 15776612  | 130585   | 0.8            |
| Black/African American | Pipe              | 30200317  | 517720   | 1.7            |
| Multiple               | Pipe              | 5692165   | 64505    | 1.1            |
| white                  | Pipe              | 191103643 | 1830265  | 0.9            |
| AIAN                   | Smokeless Tobacco | 2654842   | 138203   | 4.9            |
| Asian                  | Smokeless Tobacco | 15774857  | 152372   | 1.0            |
| Black/African American | Smokeless Tobacco | 30501903  | 233923   | 0.8            |
| Multiple               | Smokeless Tobacco | 5692647   | 64023    | 1.1            |
| white                  | Smokeless Tobacco | 187722198 | 5253293  | 2.7            |

## Smoking Prevalence by Education

Table 4: Smoking Prevalence by Education and type of Smoke

| EDUC1         | Type of Smoke     | No       | Yes      | Prevalence (%) |
|---------------|-------------------|----------|----------|----------------|
| <College Grad | Cigarette         | 64329100 | 11263121 | 14.9           |
| <HS Grad      | Cigarette         | 18030562 | 4708403  | 20.7           |
| College Grad+ | Cigarette         | 78294439 | 4645713  | 5.6            |
| HS Grad       | Cigarette         | 52787246 | 13347012 | 20.2           |
| <College Grad | E-Cigarette       | 72383707 | 3216389  | 4.3            |
| <HS Grad      | E-Cigarette       | 22030352 | 744000   | 3.3            |
| College Grad+ | E-Cigarette       | 81508035 | 1464629  | 1.8            |
| HS Grad       | E-Cigarette       | 63555768 | 2640480  | 4.0            |
| <College Grad | Cigar             | 72323713 | 3210235  | 4.3            |
| <HS Grad      | Cigar             | 22082136 | 680369   | 3.0            |
| College Grad+ | Cigar             | 79992039 | 2934107  | 3.5            |
| HS Grad       | Cigar             | 63424493 | 2738163  | 4.1            |
| <College Grad | Pipe              | 74731746 | 847811   | 1.1            |
| <HS Grad      | Pipe              | 22649285 | 125067   | 0.5            |
| College Grad+ | Pipe              | 82153734 | 764395   | 0.9            |
| HS Grad       | Pipe              | 65320440 | 843881   | 1.3            |
| <College Grad | Smokeless Tobacco | 73572387 | 2010588  | 2.7            |
| <HS Grad      | Smokeless Tobacco | 22064989 | 709363   | 3.1            |
| College Grad+ | Smokeless Tobacco | 81932106 | 1040754  | 1.3            |
| HS Grad       | Smokeless Tobacco | 64104309 | 2093660  | 3.2            |

# Smoking Prevalence by Income Relative to Federal Poverty Level

Table 5: Smoking Prevalence by Ratio of Family Income to Federal Poverty Level

| binned_RATCAT | Type of Smoke     | No        | Yes     | Prevalence (%) |
|---------------|-------------------|-----------|---------|----------------|
| <100%         | Cigarette         | 18499768  | 5407161 | 22.6           |
| >400%         | Cigarette         | 93338565  | 9164070 | 8.9            |
| 100 - 200 %   | Cigarette         | 32354442  | 7809737 | 19.4           |
| 200 - 400 %   | Cigarette         | 56563306  | 9904970 | 14.9           |
| <100%         | E-Cigarette       | 23019229  | 935209  | 3.9            |
| >400%         | E-Cigarette       | 99727980  | 2840348 | 2.8            |
| 100 - 200 %   | E-Cigarette       | 38662620  | 1503403 | 3.7            |
| 200 - 400 %   | E-Cigarette       | 63985820  | 2476364 | 3.7            |
| <100%         | Cigar             | 22966833  | 954054  | 4.0            |
| >400%         | Cigar             | 98265778  | 4259904 | 4.2            |
| 100 - 200 %   | Cigar             | 38798074  | 1346166 | 3.4            |
| 200 - 400 %   | Cigar             | 63749565  | 2680549 | 4.0            |
| <100%         | Pipe              | 23603572  | 342490  | 1.4            |
| >400%         | Pipe              | 101738492 | 815777  | 0.8            |
| 100 - 200 %   | Pipe              | 39525291  | 636352  | 1.6            |
| 200 - 400 %   | Pipe              | 65723174  | 703781  | 1.1            |
| <100%         | Smokeless Tobacco | 23520237  | 430184  | 1.8            |
| >400%         | Smokeless Tobacco | 100150651 | 2413390 | 2.4            |
| 100 - 200 %   | Smokeless Tobacco | 39228849  | 960076  | 2.4            |
| 200 - 400 %   | Smokeless Tobacco | 64628877  | 1829919 | 2.8            |

## Smoking Prevalance by Sexual Orientation

Table 6: Smoking Prevalence by Sexual Orientation

| ORIENT_A              | Type of Smoke     | No        | Yes      | Prevalence (%) |
|-----------------------|-------------------|-----------|----------|----------------|
| Bisexual              | Cigarette         | 2509867   | 633474   | 20.2           |
| Don't know the answer | Cigarette         | 2361416   | 238615   | 9.2            |
| Gay/Lesbian           | Cigarette         | 3104618   | 822971   | 21.0           |
| Something else        | Cigarette         | 724146    | 245232   | 25.3           |
| Straight              | Cigarette         | 201548961 | 31525456 | 13.5           |
| Bisexual              | E-Cigarette       | 2886909   | 254821   | 8.1            |
| Don't know the answer | E-Cigarette       | 2538348   | 66304    | 2.5            |
| Gay/Lesbian           | E-Cigarette       | 3715049   | 240334   | 6.1            |
| Something else        | E-Cigarette       | 894684    | 68442    | 7.1            |
| Straight              | E-Cigarette       | 225910974 | 7304912  | 3.1            |
| Bisexual              | Cigar             | 2918198   | 217721   | 6.9            |
| Don't know the answer | Cigar             | 2544307   | 54003    | 2.1            |
| Gay/Lesbian           | Cigar             | 3798400   | 156983   | 4.0            |
| Something else        | Cigar             | 858706    | 110672   | 11.4           |
| Straight              | Cigar             | 224158314 | 8923963  | 3.8            |
| Bisexual              | Pipe              | 2991573   | 151768   | 4.8            |
| Don't know the answer | Pipe              | 2589578   | 8732     | 0.3            |
| Gay/Lesbian           | Pipe              | 3891650   | 63733    | 1.6            |
| Something else        | Pipe              | 944520    | 24858    | 2.6            |
| Straight              | Pipe              | 230878448 | 2288051  | 1.0            |
| Bisexual              | Smokeless Tobacco | 3114307   | 29034    | 0.9            |
| Don't know the answer | Smokeless Tobacco | 2586536   | 13495    | 0.5            |
| Gay/Lesbian           | Smokeless Tobacco | 3902273   | 53110    | 1.3            |
| Something else        | Smokeless Tobacco | 969378    | 0        | 0.0            |
| Straight              | Smokeless Tobacco | 227513812 | 5731495  | 2.5            |

## Smoking Prevalence by Mental Health status

Table 7: Prevalence of Smoking among people with Mental health Problems

| Mental Health | Type of Smoke     | No       | Yes      | Prevalence (%) |
|---------------|-------------------|----------|----------|----------------|
| Depression    | Cigarette         | 29662036 | 8496624  | 22.3           |
| Anxiety       | Cigarette         | 64779754 | 13705906 | 17.5           |
| Depression    | E-cigarette       | 36043850 | 2150607  | 5.6            |
| Anxiety       | E-cigarette       | 74477688 | 4038902  | 5.1            |
| Depression    | Pipe              | 37557092 | 630600   | 1.7            |
| Anxiety       | Pipe              | 77560905 | 961867   | 1.2            |
| Depression    | Cigar             | 36382701 | 1783157  | 4.7            |
| Anxiety       | Cigar             | 74967259 | 3490936  | 4.4            |
| Depression    | Smokeless Tobacco | 37113950 | 1083839  | 2.8            |
| Anxiety       | Smokeless Tobacco | 76533133 | 2006905  | 2.6            |

## Dual Smoking Prevalence (Cigarette and other Products)

Table 8: Dual Prevalence of Cigarette and E-cigarette

| binmed_age | Prevalence of cigarette (%) | Prevalence of E-cigarette (%) | Dual prevalence cigarette and e-cig (%) |
|------------|-----------------------------|-------------------------------|---|
| 18-24      | 7.8                         | 7.6                           | 1.7                                     |
| 25-44      | 16.5                        | 4.3                           | 1.9                                     |
| 45-64      | 16.3                        | 2.1                           | 1.2                                     |
| 65+        | 8.4                         | 0.8                           | 0.4                                     |

Table 9: Dual Prevalence of Cigarette and Cigar

| binmed_age | Prevalence of cigarette (%) | Prevalence of Cigar (%) | Dual prevalence cigarette and cigar (%) |
|------------|-----------------------------|-------------------------|---|
| 18-24      | 7.8                         | 4.1                     | 1.5                                     |
| 25-44      | 16.5                        | 5.0                     | 1.9                                     |
| 45-64      | 16.3                        | 3.7                     | 1.4                                     |
| 65+        | 8.4                         | 2.1                     | 0.6                                     |

Table 10: Dual Prevalence of Cigarette and Pipe

| binmed_age | Prevalence of cigarette (%) | Prevalence of Pipe (%) | Dual prevalence cigarette and pipe (%) |
|------------|-----------------------------|------------------------|--|
| 18-24      | 7.8                         | 1.8                    | 0.7                                    |
| 25-44      | 16.5                        | 1.5                    | 0.6                                    |
| 45-64      | 16.3                        | 0.6                    | 0.3                                    |
| 65+        | 8.4                         | 0.6                    | 0.1                                    |

Table 11: Dual Prevalence of Cigarette and Smokeless Tobacco

| binmed_age | Prevalence of cigarette (%) | Prevalence of Smokeless Tobacco (%) | Dual prevalence cigarette and smokeless tobacco (%) |
|------------|-----------------------------|-------------------------------------|---|
| 18-24      | 7.8                         | 1.6                                 | 0.5   |
| 25-44      | 16.5                        | 3.2                                 | 1.0   |
| 45-64      | 16.3                        | 2.4                                 | 0.5   |
| 65+        | 8.4                         | 1.4                                 | 0.1   |