State Sample Sizes

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **State Sample Sizes** | **Oversample Ratio 'k'** | **Proportion of Households with Children from  2015 ACS 'P'** | **Sampling Variance**  **‘R’** | **Total  Sample** | **Stratum 1  Sample (Admin Flag  for HHLD  w/Children)** | **Stratum 2a  Sample (Admin Flag  for HHLD  w/o Children)** |
| Alabama | 3.0 | 38% | 0.99 | 4144 | 2460 | 1684 |
| Alaska | 3.0 | 31% | 1.04 | 4196 | 1809 | 2387 |
| Arizona | 3.0 | 42% | 1.03 | 3256 | 2018 | 1238 |
| Arkansas | 3.0 | 37% | 1.00 | 3961 | 2190 | 1771 |
| California | 3.0 | 50% | 1.03 | 2896 | 2060 | 836 |
| Colorado | 3.0 | 46% | 1.00 | 2478 | 1658 | 820 |
| Connecticut | 3.0 | 45% | 1.00 | 2700 | 1841 | 859 |
| Delaware | 3.0 | 50% | 1.01 | 2791 | 2088 | 703 |
| District of Columbia | 5.0 | 32% | 1.08 | 3195 | 2273 | 922 |
| Florida | 3.0 | 39% | 0.99 | 3812 | 2494 | 1317 |
| Georgia | 3.0 | 44% | 1.02 | 3609 | 2449 | 1160 |
| Hawaii | 2.0 | 36% | 0.99 | 3457 | 1293 | 2164 |
| Idaho | 3.0 | 43% | 1.01 | 2580 | 1688 | 892 |
| Illinois | 3.0 | 45% | 1.01 | 2706 | 1815 | 891 |
| Indiana | 3.0 | 47% | 1.02 | 2849 | 2005 | 844 |
| Iowa | 3.0 | 49% | 0.99 | 2283 | 1646 | 638 |
| Kansas | 3.0 | 47% | 1.00 | 2794 | 1947 | 848 |
| Kentucky | 3.0 | 41% | 1.01 | 3287 | 2064 | 1223 |
| Louisiana | 3.0 | 38% | 1.00 | 4650 | 2998 | 1652 |
| Maine | 5.0 | 28% | 1.02 | 3257 | 1856 | 1401 |
| Maryland | 4.0 | 49% | 1.09 | 2369 | 1850 | 519 |
| Massachusetts | 3.0 | 45% | 0.99 | 2422 | 1659 | 764 |
| Michigan | 4.0 | 46% | 1.06 | 2368 | 1789 | 578 |
| Minnesota | 3.0 | 53% | 1.00 | 1873 | 1409 | 464 |
| Mississippi | 3.0 | 38% | 1.02 | 4959 | 3003 | 1956 |
| Missouri | 3.0 | 43% | 1.01 | 2923 | 1897 | 1026 |
| Montana | 4.0 | 31% | 1.06 | 3168 | 1718 | 1450 |
| Nebraska | 3.0 | 48% | 0.99 | 2393 | 1681 | 713 |
| Nevada | 3.0 | 41% | 1.01 | 3848 | 2532 | 1316 |
| New Hampshire | 4.0 | 39% | 1.01 | 2646 | 1820 | 827 |
| New Jersey | 3.0 | 47% | 1.02 | 2689 | 1847 | 842 |
| New Mexico | 3.0 | 33% | 1.02 | 4188 | 2063 | 2125 |
| New York | 3.0 | 39% | 1.01 | 3262 | 1985 | 1277 |
| North Carolina | 4.0 | 40% | 1.06 | 2962 | 2076 | 886 |
| North Dakota | 4.0 | 39% | 1.07 | 2649 | 1720 | 929 |
| Ohio | 4.0 | 46% | 1.07 | 2577 | 1933 | 644 |
| Oklahoma | 3.0 | 37% | 1.03 | 4253 | 2416 | 1837 |
| Oregon | 4.0 | 44% | 1.06 | 2319 | 1655 | 664 |
| Pennsylvania | 4.0 | 43% | 1.05 | 2416 | 1755 | 661 |
| Rhode Island | 4.0 | 40% | 1.05 | 3024 | 2138 | 886 |
| South Carolina | 4.0 | 40% | 1.07 | 3310 | 2338 | 972 |
| South Dakota | 3.0 | 43% | 1.02 | 2550 | 1609 | 940 |
| Tennessee | 4.0 | 42% | 1.07 | 2980 | 2182 | 798 |
| Texas | 3.0 | 47% | 1.05 | 3347 | 2316 | 1030 |
| Utah | 3.0 | 56% | 1.05 | 2076 | 1573 | 503 |
| Vermont | 4.0 | 30% | 0.99 | 2858 | 1504 | 1354 |
| Virginia | 3.0 | 48% | 0.99 | 2375 | 1719 | 656 |
| Washington | 3.0 | 47% | 1.01 | 2368 | 1629 | 739 |
| West Virginia | 3.0 | 32% | 1.02 | 4047 | 1881 | 2166 |
| Wisconsin | 3.0 | 50% | 0.99 | 2012 | 1466 | 545 |
| Wyoming | 3.0 | 34% | 1.01 | 3923 | 1920 | 2003 |
| Total |  |  |  | 156,054 | 99,733 | 56,321 |
| Proportion by Strata |  |  |  |  | 64% | 36% |

**Calculations for State Sample Sizes**

The oversampling factor (k) was calculated to maximize the sample from Stratum 1 without increasing the variance (R) too much beyond that of a proportional stratified design of a similar cost.

(P) is the proportion of households with children based on the 2015 ACS audit.

The portion of the sample coming from each stratum was calculated using the oversample rate (k) and the portion of all households in each stratum (W1 and W2). These estimates were then used with the prevalence of households with children in each stratum (P1 and P2) to get the percent of the sample expected to have children. Address valid rates, Screener and Topical returns rates were estimated by state (and address valid rates by Stratum as well) using 2016 response outcomes. Using this response information, along with the percent of the sample expected to have children in each state, we calculated the sample size needed to get 460 topical interviews in each state.

For example, in Alabama:

The oversampling rate (k) was recalculated to be 3.0, for an R = .99.

Using the ACS x NSCH Flag tabulations:

|  |  |  |  |
| --- | --- | --- | --- |
|  | NSCH Administrative Flag for Household with Children | NSCH Administrative Flag for Household without Children | Proportion of All Households with children from 2014 ACS |
| 2015 ACS Household with Children | 74.5% (P1) | 15.8% (P2) | 22.4% (W1) |
| 2015 ACS Household without Children | 25.5% | 84.2% | 77.6% (W2) |

The portion of the sample coming from Stratum 1 was estimated to be (k\*W1)/(W2 + k\*W1) = 64.1% and the portion of the sample from Stratum 2a was 35.9%.

Within our sample we expect 74.5%\*64.1% + 15.8%\*35.9% = 53.4% to have children.

We can expect a completed interview from 84.4% (Valid) \* 36.9% (Screener) \* 53.4% (Children) \* 66.7% (Topical) = 11.1% of addresses.

Now we take the target of 460 interviews and adjust for the expected response and the percent of the sample with children to get the state sample size: 460\*(11.1%)-1 = 4144.

Now n1 = 64.1%\*4144=2460 and n2 = 35.9%\*4144 = 1684.