## Outcome 13: Poor physical or mental health prevent from doing usual activities

Internal variable name: outc13_poorhlthdays
Definition: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

## Predictive models

|  | Mixed, demos only | Logit, no area effects | Mixed with area covariates |
| :---: | :---: | :---: | :---: |
|  | b/se | b/se | b/se |
| Outcome 13: Poor physical or mental health prevent from doing usual activities |  |  |  |
| NH White | 0.0000 | 0.0000 | 0.0000 |
|  | (.) | (.) | (.) |
| NH Black vs. NH White | -0.0027 | -0.0258 | -0.0258 |
|  | (0.0853) | (0.1132) | (0.0855) |
| NH Asian vs. NH White | -0.6699* | -0.5546* | -0.5546 |
|  | (0.3008) | (0.2736) | (0.2914) |
| NH Other vs. NH White | 0.4048** | 0.4231* | 0.4231** |
|  | (0.1351) | (0.1792) | (0.1338) |
| Hispanic vs. NH White | 0.1466 | 0.1915 | 0.1915 |
|  | (0.1761) | (0.1787) | (0.1743) |
| SEX OF RESPONDENT=1 | 0.0000 | 0.0000 | 0.0000 |
|  | (.) | (.) | (.) |
| Female | 0.0630 | 0.0549 | 0.0549 |
|  | (0.1067) | (0.0861) | (0.1082) |
| Age 18-34 vs. 65+ | 0.3033* | 0.3146** | 0.3146* |
|  | (0.1294) | (0.1131) | (0.1272) |
| Age 35-44 vs. 65+ | -0.0358 | -0.0198 | -0.0198 |
|  | (0.1397) | (0.1289) | (0.1382) |
| Age 45-54 vs. 65+ | 0.2045 | 0.2338 | 0.2338 |
|  | (0.1317) | (0.1272) | (0.1325) |
| Age 55-64 vs. 65+ | 0.1202 | 0.1231 | 0.1231 |
|  | (0.1127) | (0.1179) | (0.1140) |
| 65+ | 0.0000 | 0.0000 | 0.0000 |
|  | (.) | (.) | (.) |
| Heart_Disease hospitalization rate per 1 K |  | 0.0243* | 0.0243*** |
|  |  | (0.0095) | (0.0057) |
| Log(Other female sites |  | -0.1041 | -0.1041 |


| Female Rate +1 ) |  |  | $(0.0755)$ |
| :--- | :---: | :---: | :---: |
|  |  | $-0.7219^{* * *}$ | $(0.0535)$ |
| _cons | $-0.4713^{* * *}$ | $(0.1665)$ | $-0.7219^{* * *}$ |
|  | $(0.1055)$ |  | $(0.1361)$ |
| Area effect variance |  |  | 0.0000 |
| var(_cons[FIPS_county]) | 0.0000 |  | $(0.0000)$ |

Number of alternative models used to estimate model error $=6$.

## Results by health districts

| County name | County FIPS | Direct estimate | Direct 95\% CI | SAE composite | SAE Cl |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Augusta County | 51015 | 50.4\% | (35.0\%, 65.7\%) | 41.1\% | (38.0\%, 44.3\%) |
| Bath County | 51017 | 65.0\% | (17.5\%, 94.2\%) | 48.9\% | (44.9\%, 53.0\%) |
| Caroline County | 51033 | 48.6\% | (19.7\%, 78.5\%) | 44.5\% | (41.9\%, 47.1\%) |
| Clarke County | 51043 | 20.5\% | (2.6\%, 71.4\%) | 44.2\% | (41.3\%, 47.1\%) |
| Culpeper County | 51047 | 39.8\% | (15.4\%, 70.5\%) | 43.4\% | (40.8\%, 46.0\%) |
| Fauquier County | 51061 | 49.6\% | (28.7\%, 70.7\%) | 40.1\% | (37.2\%, 43.0\%) |
| Frederick County | 51069 | 41.5\% | (21.8\%, 64.3\%) | 43.5\% | (40.8\%, 46.2\%) |
| Highland County | 51091 | 30.0\% | (3.1\%, 89.1\%) | 45.8\% | (42.4\%, 49.3\%) |
| King George County | 51099 | 21.6\% | (7.5\%, 48.4\%) | 37.2\% | (32.3\%, 42.4\%) |
| Madison County | 51113 | 18.0\% | (3.6\%, 56.5\%) | 44.2\% | (41.4\%, 47.0\%) |
| Orange County | 51137 | 40.5\% | (14.9\%, 72.5\%) | 45.3\% | (42.4\%, 48.1\%) |
| Page County | 51139 | 51.6\% | (17.8\%, 84.0\%) | 46.6\% | (43.2\%, 50.1\%) |
| Rappahannock County | 51157 | 52.5\% | (17.1\%, 85.6\%) | 38.0\% | (32.2\%, 44.2\%) |
| Rockbridge County | 51163 | 37.0\% | (16.0\%, 64.5\%) | 45.2\% | (42.4\%, 48.0\%) |
| Rockingham County | 51165 | 46.0\% | (24.9\%, 68.7\%) | 45.6\% | (42.8\%, 48.4\%) |
| Shenandoah County | 51171 | 35.9\% | (17.1\%, 60.5\%) | 45.3\% | (42.2\%, 48.4\%) |
| Spotsylvania County | 51177 | 28.5\% | (16.8\%, 44.1\%) | 39.8\% | (37.0\%, 42.7\%) |
| Stafford County | 51179 | 33.8\% | (21.3\%, 49.0\%) | 38.1\% | (34.9\%, 41.4\%) |
| Warren County | 51187 | 47.4\% | (22.5\%, 73.7\%) | 44.8\% | (41.9\%, 47.8\%) |
| Buena Vista City | 51530 | 43.1\% | (3.0\%, 94.9\%) | 46.7\% | (43.5\%, 49.9\%) |
| Fredericksburg City | 51630 | 69.8\% | (37.9\%, 89.8\%) | 42.9\% | (40.3\%, 45.6\%) |
| Harrisonburg City | 51660 | 46.0\% | (15.4\%, 80.0\%) | 41.8\% | (38.6\%, 45.0\%) |
| Lexington City | 51678 | .\% | (.\%, .\%) | 43.9\% | (40.0\%, 47.9\%) |
| Staunton City | 51790 | 27.3\% | (4.3\%, 75.9\%) | 46.4\% | (42.4\%, 50.5\%) |
| Waynesboro | 51820 | 45.4\% | (5.9\%, 91.7\%) | 41.5\% | (35.5\%, 47.6\%) |


| City |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Winchester <br> City | 51840 | $43.0 \%$ | $(7.8 \%, 87.0 \%)$ | $39.5 \%$ | $(34.9 \%, 44.3 \%)$ |


| County name | County FIPS | Direct <br> estimate | Direct 95\% CI | SAE composite | SAE CI |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Albemarle <br> County | 51003 | $35.1 \%$ | $(21.6 \%, 51.5 \%)$ | $39.2 \%$ | $(37.2 \%, 41.3 \%)$ |
| Alleghany <br> County | 51005 | $67.8 \%$ | $(44.6 \%, 84.6 \%)$ | $49.5 \%$ | $(45.3 \%, 53.7 \%)$ |
| Amherst <br> County | 51009 | $34.7 \%$ | $(15.6 \%, 60.3 \%)$ | $45.0 \%$ | $(42.1 \%, 47.9 \%)$ |
| Appomattox <br> County | 51011 | $50.5 \%$ | $(26.3 \%, 74.5 \%)$ | $45.6 \%$ | $(42.6 \%, 48.6 \%)$ |
| Arlington City | 51013 | $35.5 \%$ | $(24.4 \%, 48.3 \%)$ | $34.3 \%$ | $(31.6 \%, 37.1 \%)$ |
| Bedford <br> County | 51019 | $39.4 \%$ | $(23.4 \%, 58.0 \%)$ | $39.1 \%$ | $(35.0 \%, 43.2 \%)$ |
| Botetourt <br> County | 51023 | $50.7 \%$ | $(23.7 \%, 77.2 \%)$ | $43.4 \%$ | $(40.9 \%, 46.0 \%)$ |
| Campbell <br> County | 51031 | $23.6 \%$ | $(12.5 \%, 39.9 \%)$ | $41.3 \%$ | $(38.3 \%, 44.3 \%)$ |
| Craig County | 51045 | $19.2 \%$ | $(1.8 \%, 75.9 \%)$ | $44.5 \%$ | $(41.5 \%, 47.6 \%)$ |
| Fairfax County | 51059 | $38.5 \%$ | $(32.1 \%, 45.3 \%)$ | $36.1 \%$ | $(33.7 \%, 38.7 \%)$ |
| Fluvanna <br> County | 51065 | $65.8 \%$ | $(14.2 \%, 95.7 \%)$ | $42.2 \%$ | $(39.5 \%, 45.0 \%)$ |
| Greene <br> County | 51079 | $61.2 \%$ | $(19.5 \%, 91.1 \%)$ | $43.3 \%$ | $(40.8 \%, 45.8 \%)$ |
| Loudoun <br> County | 51107 | $32.5 \%$ | $(23.4 \%, 43.1 \%)$ | $36.7 \%$ | $(34.0 \%, 39.5 \%)$ |
| Louisa County | 51109 | $73.4 \%$ | $(42.1 \%, 91.3 \%)$ | $43.3 \%$ | $(40.3 \%, 46.3 \%)$ |
| Nelson County | 51125 | $78.3 \%$ | $(26.0 \%, 97.4 \%)$ | $45.4 \%$ | $(42.3 \%, 48.5 \%)$ |
| Prince William <br> County | 51153 | $37.9 \%$ | $(29.2 \%, 47.4 \%)$ | $38.5 \%$ | $(36.3 \%, 40.8 \%)$ |
| Roanoke <br> County | 51161 | $53.4 \%$ | $(38.4 \%, 67.8 \%)$ | $43.3 \%$ | $(40.9 \%, 45.8 \%)$ |
| Alexandria City | 51510 | $50.3 \%$ | $(33.5 \%, 67.0 \%)$ | $39.6 \%$ | $(36.7 \%, 42.6 \%)$ |
| Charlottesville <br> City | 51540 | $52.6 \%$ | $(22.7 \%, 80.7 \%)$ | $40.4 \%$ | $(37.7 \%, 43.1 \%)$ |
| Covington City | 51580 | $100.0 \%$ | $(9.7 \%, 100.0 \%)$ | $52.4 \%$ | $(42.2 \%, 62.5 \%)$ |
| Fairfax City | 51600 | $43.2 \%$ | $(22.0 \%, 67.2 \%)$ | $39.9 \%$ | $(37.1 \%, 42.7 \%)$ |
| Falls Church <br> City | 51610 | $68.6 \%$ | $(15.7 \%, 94.9 \%)$ | $36.8 \%$ | $(33.6 \%, 40.1 \%)$ |
| Lynchburg City | 51680 | $25.4 \%$ | $(12.2 \%, 45.5 \%)$ | $44.3 \%$ | $(41.7 \%, 47.0 \%)$ |
| Manassas City | 51683 | $48.5 \%$ | $(18.2 \%, 80.0 \%)$ | $41.1 \%$ | $(37.4 \%, 44.9 \%)$ |
| Manassas Park <br> City | 51685 | $66.5 \%$ | $(14.6 \%, 95.2 \%)$ | $39.5 \%$ | $(35.4 \%, 43.7 \%)$ |
| Salem City | 51775 | $54.1 \%$ | $(16.7 \%, 87.4 \%)$ | $44.8 \%$ | $(41.9 \%, 47.8 \%)$ |
|  |  |  |  |  |  |


| County name | County FIPS | Direct <br> estimate | Direct 95\% CI | SAE composite | SAE CI |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Bland County | 51021 | $31.5 \%$ | $(4.7 \%, 81.1 \%)$ | $43.6 \%$ | $(40.9 \%, 46.3 \%)$ |
| Buchanan <br> County | 51027 | $62.6 \%$ | $(35.4 \%, 83.6 \%)$ | $42.5 \%$ | $(39.2 \%, 45.8 \%)$ |
| Carroll County | 51035 | $50.6 \%$ | $(19.3 \%, 81.4 \%)$ | $39.7 \%$ | $(36.8 \%, 42.8 \%)$ |
| Dickenson <br> County | 51051 | $40.2 \%$ | $(13.7 \%, 73.9 \%)$ | $40.1 \%$ | $(36.2 \%, 44.1 \%)$ |
| Floyd County | 51063 | $52.5 \%$ | $(21.7 \%, 81.5 \%)$ | $43.9 \%$ | $(41.4 \%, 46.4 \%)$ |
| Franklin <br> County | 51067 | $17.5 \%$ | $(8.4 \%, 43.1 \%)$ | $44.0 \%$ | $(41.3 \%, 46.6 \%)$ |
| Giles County | 51071 | $29.5 \%$ | $(8.4 \%, 68.3 \%)$ | $49.7 \%$ | $(45.7 \%, 53.6 \%)$ |
| Grayson <br> County | 51077 | $34.7 \%$ | $(11.6 \%, 68.4 \%)$ | $40.0 \%$ | $(36.9 \%, 43.3 \%)$ |
| Henry County | 51089 | $36.8 \%$ | $(23.1 \%, 53.1 \%)$ | $43.3 \%$ | $(40.6 \%, 46.1 \%)$ |
| Lee County | 51105 | $17.8 \%$ | $(5.8 \%, 42.9 \%)$ | $41.2 \%$ | $(38.0 \%, 44.4 \%)$ |
| Montgomery <br> County | 51121 | $36.6 \%$ | $(22.8 \%, 53.0 \%)$ | $41.1 \%$ | $(38.4 \%, 43.9 \%)$ |
| Patrick County | 51141 | $48.9 \%$ | $(17.6 \%, 81.0 \%)$ | $39.5 \%$ | $(36.3 \%, 42.7 \%)$ |
| Pittsylvania <br> County | 51143 | $43.1 \%$ | $(27.6 \%, 60.2 \%)$ | $43.2 \%$ | $(40.5 \%, 45.9 \%)$ |
| Pulaski County | 51155 | $63.2 \%$ | $(36.9 \%, 83.4 \%)$ | $50.2 \%$ | $(45.9 \%, 54.6 \%)$ |
| Russell County | 51167 | $51.3 \%$ | $(25.9 \%, 76.0 \%)$ | $42.0 \%$ | $(39.3 \%, 44.7 \%)$ |
| Scott County | 51169 | $35.2 \%$ | $(17.1 \%, 58.9 \%)$ | $36.1 \%$ | $(30.9 \%, 41.7 \%)$ |
| Smyth County | 51173 | $38.2 \%$ | $(17.8 \%, 63.8 \%)$ | $41.5 \%$ | $(38.9 \%, 44.2 \%)$ |
| Tazewell <br> County | 51185 | $55.6 \%$ | $(36.6 \%, 73.0 \%)$ | $43.9 \%$ | $(40.6 \%, 47.2 \%)$ |
| Washington <br> County | 51191 | $28.2 \%$ | $(14.5 \%, 47.6 \%)$ | $40.2 \%$ | $(37.4 \%, 43.1 \%)$ |
| Wise County | 51195 | $41.8 \%$ | $(26.3 \%, 59.1 \%)$ | $43.1 \%$ | $(40.2 \%, 46.0 \%)$ |
| Wythe County | 51197 | $66.9 \%$ | $(42.5 \%, 84.6 \%)$ | $46.3 \%$ | $(43.2 \%, 49.4 \%)$ |
| Bristol City | 51520 | $100.0 \%$ | $(9.4 \%, 100.0 \%)$ | $35.8 \%$ | $(30.6 \%, 41.3 \%)$ |
| Danville City | 51590 | $51.2 \%$ | $(18.0 \%, 83.4 \%)$ | $46.8 \%$ | $(43.3 \%, 50.3 \%)$ |
| Galax City | 51640 | $35.3 \%$ | $(1.3 \%, 96.4 \%)$ | $46.7 \%$ | $(43.4 \%, 49.9 \%)$ |
| Martinsville <br> City | 51690 | $52.8 \%$ | $(14.7 \%, 87.9 \%)$ | $48.2 \%$ | $(44.6 \%, 51.9 \%)$ |
| Norton City | 51720 | $86.3 \%$ | $(1.9 \%, 99.8 \%)$ | $45.1 \%$ | $(42.2 \%, 48.0 \%)$ |
| Radford City | 51750 | $34.6 \%$ | $(12.4 \%, 66.3 \%)$ | $42.0 \%$ | $(39.2 \%, 44.8 \%)$ |
| Roanoke City | 51770 | $40.7 \%$ | $(25.4 \%, 58.0 \%)$ | $45.1 \%$ | $(42.1 \%, 48.2 \%)$ |


| County name | County FIPS | Direct <br> estimate | Direct 95\% CI | SAE composite | SAE CI |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Amelia County | 51007 | $40.2 \%$ | $(10.7 \%, 79.1 \%)$ | $44.6 \%$ | $(41.8 \%, 47.4 \%)$ |
| Brunswick <br> County | 51025 | $60.7 \%$ | $(25.9 \%, 87.2 \%)$ | $48.4 \%$ | $(44.6 \%, 52.2 \%)$ |
| Buckingham <br> County | 51029 | $69.1 \%$ | $(34.2 \%, 90.5 \%)$ | $43.9 \%$ | $(41.0 \%, 46.7 \%)$ |
| Charles City <br> County | 51036 | $81.0 \%$ | $(2.6 \%, 99.6 \%)$ | $44.5 \%$ | $(41.6 \%, 47.4 \%)$ |
| Charlotte <br> County | 51037 | $28.9 \%$ | $(9.1 \%, 62.4 \%)$ | $47.5 \%$ | $(43.9 \%, 51.2 \%)$ |
| Chesterfield <br> County | 51041 | $44.0 \%$ | $(34.4 \%, 54.1 \%)$ | $38.9 \%$ | $(36.0 \%, 41.8 \%)$ |
| Cumberland <br> County | 51049 | $70.5 \%$ | $(26.1 \%, 94.2 \%)$ | $44.1 \%$ | $(41.4 \%, 46.9 \%)$ |
| Dinwiddie <br> County | 51053 | $59.0 \%$ | $(29.5 \%, 83.2 \%)$ | $46.4 \%$ | $(43.1 \%, 49.7 \%)$ |
| Goochland <br> County | 51075 | $36.4 \%$ | $(6.6 \%, 82.2 \%)$ | $42.4 \%$ | $(39.9 \%, 44.9 \%)$ |
| Greensville <br> County | 51081 | $53.7 \%$ | $(12.2 \%, 90.6 \%)$ | $51.2 \%$ | $(46.1 \%, 56.2 \%)$ |
| Halifax County | 51083 | $40.2 \%$ | $(21.8 \%, 61.9 \%)$ | $47.0 \%$ | $(43.5 \%, 50.6 \%)$ |
| Hanover <br> County | 51085 | $31.0 \%$ | $(14.5 \%, 54.3 \%)$ | $38.4 \%$ | $(34.7 \%, 42.2 \%)$ |
| Henrico <br> County | 51087 | $40.4 \%$ | $(29.2 \%, 52.7 \%)$ | $38.6 \%$ | $(35.7 \%, 41.6 \%)$ |
| Lunenburg <br> County | 51111 | $29.3 \%$ | $(11.5 \%, 56.9 \%)$ | $46.8 \%$ | $(43.6 \%, 50.1 \%)$ |
| Mecklenburg <br> County | 51117 | $54.6 \%$ | $(34.0 \%, 73.7 \%)$ | $50.4 \%$ | $(45.8 \%, 55.0 \%)$ |
| New Kent <br> County | 51127 | $68.8 \%$ | $(36.9 \%, 89.3 \%)$ | $42.2 \%$ | $(39.6 \%, 44.9 \%)$ |
| Nottoway <br> County | 51135 | $37.8 \%$ | $(12.7 \%, 71.8 \%)$ | $47.1 \%$ | $(43.8 \%, 50.5 \%)$ |
| Powhatan <br> County | 51145 | $51.6 \%$ | $(14.6 \%, 87.0 \%)$ | $42.2 \%$ | $(39.5 \%, 45.0 \%)$ |
| Prince Edward <br> County | 51147 | $39.6 \%$ | $(12.9 \%, 74.4 \%)$ | $44.6 \%$ | $(41.7 \%, 47.5 \%)$ |
| Prince George <br> County | 51149 | $55.6 \%$ | $(31.3 \%, 77.6 \%)$ | $43.0 \%$ | $(40.3 \%, 45.8 \%)$ |
| Surry County | 51181 | $24.3 \%$ | $(2.1 \%, 87.8 \%)$ | $45.1 \%$ | $(42.2 \%, 48.1 \%)$ |
| Sussex County | 51183 | $26.0 \%$ | $(5.5 \%, 67.9 \%)$ | $48.8 \%$ | $(44.8 \%, 52.9 \%)$ |
| Colonial <br> Heights City | 51570 | $51.4 \%$ | $(20.5 \%, 81.3 \%)$ | $49.5 \%$ | $(45.3 \%, 53.8 \%)$ |
| Emporia City | 51595 | $100.0 \%$ | $59.8 \%$ | $(50.1 \%, 68.7 \%)$ |  |
| Hopewell City | 51670 | $50.9 \%$ | $(19.3 \%, 81.8 \%)$ | $49.7 \%$ | $(45.2 \%, 54.2 \%)$ |
|  |  |  |  | $(19.2 \%$, |  |


| Petersburg <br> City | 51730 | $54.2 \%$ | $(23.4 \%, 82.2 \%)$ | $51.4 \%$ | $(46.3 \%, 56.4 \%)$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Richmond City | 51760 | $49.7 \%$ | $(36.1 \%, 63.5 \%)$ | $41.8 \%$ | $(39.3 \%, 44.3 \%)$ |


| County name | County FIPS | Direct <br> estimate | Direct 95\% CI | SAE composite | SAE CI |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Accomack <br> County | 51001 | $40.2 \%$ | $(22.2 \%, 61.3 \%)$ | $41.6 \%$ | $(38.9 \%, 44.4 \%)$ |
| Essex County | 51057 | $63.6 \%$ | $(30.6 \%, 87.3 \%)$ | $47.2 \%$ | $(43.1 \%, 51.4 \%)$ |
| Gloucester <br> County | 51073 | $57.9 \%$ | $(32.8 \%, 79.5 \%)$ | $40.6 \%$ | $(36.5 \%, 44.8 \%)$ |
| Isle of Wight <br> County | 51093 | $54.5 \%$ | $(26.6 \%, 79.9 \%)$ | $44.5 \%$ | $(41.8 \%, 47.3 \%)$ |
| James City <br> County | 51095 | $36.8 \%$ | $(23.1 \%, 53.1 \%)$ | $43.7 \%$ | $(40.8 \%, 46.6 \%)$ |
| King and Queen <br> County | 51097 | $40.9 \%$ | $(4.7 \%, 90.6 \%)$ | $39.9 \%$ | $(32.1 \%, 48.2 \%)$ |
| King William <br> County | 51101 | $35.5 \%$ | $(8.3 \%, 77.0 \%)$ | $44.4 \%$ | $(41.8 \%, 47.1 \%)$ |
| Lancaster <br> County | 51103 | $35.3 \%$ | $(10.5 \%, 71.8 \%)$ | $40.3 \%$ | $(35.1 \%, 45.7 \%)$ |
| Mathews <br> County | 51115 | $54.1 \%$ | $(23.9 \%, 81.6 \%)$ | $48.1 \%$ | $(44.2 \%, 52.0 \%)$ |
| Middlesex <br> County | 51119 | $17.1 \%$ | $(4.6 \%, 66.4 \%)$ | $45.1 \%$ | $(42.0 \%, 48.3 \%)$ |
| Northampton <br> County | 51131 | $54.1 \%$ | $(29.7 \%, 76.6 \%)$ | $46.5 \%$ | $(43.2 \%, 49.9 \%)$ |
| Northumberland <br> County | 51133 | $61.5 \%$ | $(22.3 \%, 89.8 \%)$ | $45.6 \%$ | $(42.3 \%, 48.8 \%)$ |
| Richmond <br> County | 51159 | $59.7 \%$ | $(33.9 \%, 81.0 \%)$ | $45.2 \%$ | $(41.7 \%, 48.7 \%)$ |
| Southampton <br> County | 51175 | $51.1 \%$ | $(24.3 \%, 77.3 \%)$ | $46.6 \%$ | $(43.4 \%, 49.9 \%)$ |
| Westmoreland <br> County | 51193 | $38.6 \%$ | $(18.5 \%, 63.5 \%)$ | $45.7 \%$ | $(42.4 \%, 49.0 \%)$ |
| York County | 51199 | $41.8 \%$ | $(22.4 \%, 64.2 \%)$ | $41.8 \%$ | $(39.4 \%, 44.3 \%)$ |
| Chesapeake City | 51550 | $45.3 \%$ | $(34.3 \%, 56.9 \%)$ | $43.1 \%$ | $(40.7 \%, 45.5 \%)$ |
| Franklin City | 51620 | $0.0 \%$ | $(0.0 \%, 92.1 \%)$ | $51.1 \%$ | $(46.1 \%, 56.2 \%)$ |
| Hampton City | 51650 | $52.0 \%$ | $(39.1 \%, 64.7 \%)$ | $43.3 \%$ | $(40.4 \%, 46.2 \%)$ |
| Newport News <br> City | 51700 | $41.8 \%$ | $(29.7 \%, 55.0 \%)$ | $43.1 \%$ | $(40.6 \%, 45.8 \%)$ |
| Norfolk City | 51710 | $41.1 \%$ | $(30.8 \%, 52.3 \%)$ | $43.3 \%$ | $(40.9 \%, 45.8 \%)$ |
| Poquoson City | 51735 | $26.5 \%$ | $(0.8 \%, 96.7 \%)$ | $42.9 \%$ | $(40.3 \%, 45.4 \%)$ |
| Portsmouth City | 51740 | $45.3 \%$ | $(31.2 \%, 60.2 \%)$ | $41.0 \%$ | $(37.1 \%, 45.0 \%)$ |
| Suffolk City | 51800 | $50.0 \%$ | $(29.3 \%, 70.7 \%)$ | $44.1 \%$ | $(41.5 \%, 46.9 \%)$ |
| Virginia Beach <br> City | 51810 | $46.1 \%$ | $(37.0 \%, 55.4 \%)$ | $39.3 \%$ | $(37.3 \%, 41.4 \%)$ |
| Williamsburg <br> City | 51830 | $78.7 \%$ | $(25.7 \%, 97.5 \%)$ | $39.9 \%$ | $(36.3 \%, 43.5 \%)$ |
|  |  |  |  |  |  |

## Poor health prevents activities Central Shenandoah and Lord Fairfax HDs



Text at right: 2-sided 95\% LCB | Point Estimate | 2-sided 95\% UCB Gray markers: 95\% confidence interval

## Poor health prevents activities Alleghany, Roanoke and Central Virginia HDs



Text at right: 2-sided 95\% LCB | Point Estimate | 2-sided 95\% UCB Gray markers: 95\% confidence interval

## Poor health prevents activities <br> Cumberland Plateau and Lenowisco HDs



Text at right: 2-sided 95\% LCB | Point Estimate | 2-sided 95\% UCB Gray markers: 95\% confidence interval

## Poor health prevents activities Pittsylvania/Danville, Southside and West Piedmont HDs



## Poor health prevents activities New River and Mount Rogers HDs



Text at right: 2-sided 95\% LCB | Point Estimate | 2-sided 95\% UCB Gray markers: $95 \%$ confidence interval


Text at right: 2-sided 95\% LCB | Point Estimate | 2 -sided 95\% UCB
Gray markers: 95\% confidence interval

## Poor health prevents activities Crater, Peninsula and Hampton HDs



Text at right: 2-sided 95\% LCB | Point Estimate | 2-sided 95\% UCB
Gray markers: $95 \%$ confidence interval

## Poor health prevents activities Eastern Shore and Three Rivers HDs



Text at right: 2-sided 95\% LCB | Point Estimate | 2-sided 95\% UCB Gray markers: 95\% confidence interval


Text at right: 2-sided 95\% LCB | Point Estimate | 2-sided 95\% UCB Gray markers: $95 \%$ confidence interval


Text at right: 2-sided 95\% LCB | Point Estimate | 2-sided 95\% UCB Gray markers: 95\% confidence interval

## Poor health prevents activities Thomas Jefferson and Piedmont HDs



Text at right: 2-sided 95\% LCB | Point Estimate | 2-sided 95\% UCB Gray markers: 95\% confidence interval


Text at right: 2-sided 95\% LCB | Point Estimate | 2-sided 95\% UCB Gray markers: $95 \%$ confidence interval

## Additional diagnostics

Direct estimate is inside the 95\% SAE Wilson Cl: 26 areas.

Direct estimate is outside the $95 \%$ SAE Wilson Cl : 107 areas.

SAE estimate is inside the $95 \%$ direct Wilson $\mathrm{Cl}: 131$ areas.

SAE estimate is outside the $95 \%$ direct Wilson CI : 2 areas.

SAE Wilson $95 \% \mathrm{Cl}$ is fully inside the $95 \%$ direct Wilson Cl : 127 areas.
SAE Wilson $95 \%$ CI partially overlaps with the $95 \%$ direct Wilson CI: 6 areas.

SAE Wilson $95 \% \mathrm{Cl}$ and the $95 \%$ direct Wilson Cl do not overlap: 0 areas.

SAE standard error is less that the direct standard error: 128 areas.

SAE standard error is greater that the (nonzero) direct standard error: 0 areas.

Direct standard error is zero: 5 areas.

Proportion of SAE variance due to ACS sampling error: $\min =1.85 \% ;$ med $=19.41 \% ; \max =41.01 \%$.
Proportion of SAE variance due to sampling error in regression coefficient estimates: $\min =24.22 \%$; med $=71.31 \%$; $\max =95.06 \%$.

Proportion of SAE variance due to model selection: $\min =0.17 \% ; \operatorname{med}=6.00 \% ; \max =73.92 \%$.

Proportion of SAE variance due to area random effects: <identically zero>

