

**Online supplementary tables**

**Online supplementary Table 1a:** Unadjusted prevalence of stroke symptoms recognition in the United States by cognitive impairment status stratified by living arrangement

|                                 | <b>Lives alone</b>                          |   |  |  |  |   |
|---------------------------------|---|---|--|--|--|---|
|                                 | <b>Stroke symptom recognition</b>           |   |  |  |  |   |
|                                 | <b>Sudden confusion or trouble speaking</b> | <b>Sudden numbness or weakness of face, arm, or leg, especially on one side</b> | <b>Sudden trouble seeing in one or both eyes</b> | <b>Sudden trouble walking, dizziness, or loss of balance</b> | <b>Severe headache with no known cause</b> | <b>All five symptoms</b>                |
|                                 | Weighted %<br>(95% Confidence Interval)     | Weighted %<br>(95% Confidence Interval)   | Weighted %<br>(95% Confidence Interval)          | Weighted %<br>(95% Confidence Interval)                      | Weighted %<br>(95% Confidence Interval)    | Weighted %<br>(95% Confidence Interval) |
| <b>Has cognitive impairment</b> | 91.7<br>(89.3, 94.1)                        | 91.4<br>(88.9, 93.9)  | 78.3<br>(74.7, 81.9)                             | 87.0<br>(84.0, 90.0)   | 77.0<br>(73.3, 80.7)                       | 55.8<br>(51.4, 60.2)                    |
| <b>No cognitive impairment</b>  | 94.5<br>(93.9, 95.1)                        | 95.1<br>(94.5, 95.7)  | 85.6<br>(84.7, 86.5)                             | 92.9<br>(92.2, 93.6)   | 83.8<br>(82.8, 84.4)                       | 61.9<br>(60.6, 63.2)                    |
|                                 | <b>Lives with others</b>                    |   |  |  |  |   |
|                                 | <b>Stroke symptom recognition</b>           |   |  |  |  |   |
|                                 | <b>Sudden confusion or trouble speaking</b> | <b>Sudden numbness or weakness of face, arm, or leg, especially on one side</b> | <b>Sudden trouble seeing in one or both eyes</b> | <b>Sudden trouble walking, dizziness, or loss of balance</b> | <b>Severe headache with no known cause</b> | <b>All five symptoms</b>                |
|                                 | Weighted %<br>(95% Confidence Interval)     | Weighted %<br>(95% Confidence Interval)   | Weighted %<br>(95% Confidence Interval)          | Weighted %<br>(95% Confidence Interval)                      | Weighted %<br>(95% Confidence Interval)    | Weighted %<br>(95% Confidence Interval) |
| <b>Has cognitive impairment</b> | 92.0<br>(89.6, 94.4)                        | 93.5<br>(91.3, 95.7)  | 80.5<br>(77.0, 84.0)                             | 90.0<br>(87.3, 92.7)   | 78.8<br>(75.2, 82.4)                       | 57.4<br>(53.0, 61.8)                    |
| <b>No cognitive impairment</b>  | 95.2<br>(94.7, 95.7)                        | 96.0<br>(95.6, 96.5)  | 87.1<br>(86.3, 87.9)                             | 93.5<br>(92.9, 94.1)   | 85.0<br>(84.1, 85.9)                       | 64.3<br>(63.1, 65.5)                    |

**Online supplementary Table 1b:** Unadjusted prevalence of heart attack symptoms recognition in the United States by cognitive impairment status stratified by living arrangement

| <b>Lives alone</b>                      |  |  |   |   |   |   |
|---|--|--|---|---|---|---|
| <b>Heart attack symptom recognition</b> |  |  |   |   |   |   |
|   | <b>Jaw, neck, or back pain</b>                       | <b>Feeling weak, lightheaded, or faint</b> | <b>Chest pain or discomfort</b>         | <b>Pain or discomfort in arms or shoulder</b> | <b>Shortness of breath</b>              | <b>All five symptoms</b>                |
|   | Weighted % <sup>1</sup><br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval)    | Weighted %<br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval)       | Weighted %<br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval) |
| <b>Has cognitive impairment</b>         | 70.0<br>(66.0, 74.0)                                 | 75.9<br>(72.1, 79.7)                       | 89.6<br>(86.9, 92.3)                    | 84.4<br>(81.2, 87.6)                          | 84.7<br>(81.5, 87.9)                    | 66.9<br>(62.8, 71.0)                    |
| <b>No cognitive impairment</b>          | 73.8<br>(72.6, 75.0)                                 | 76.9<br>(75.8, 78.0)                       | 91.2<br>(90.4, 92.0)                    | 88.7<br>(87.9, 89.5)                          | 86.2<br>(85.3, 87.1)                    | 76.7<br>(75.6, 77.8)                    |
| <b>Lives with others</b>                |  |  |   |   |   |   |
| <b>Heart attack symptom recognition</b> |  |  |   |   |   |   |
|   | <b>Jaw, neck, or back pain</b>                       | <b>Feeling weak, lightheaded, or faint</b> | <b>Chest pain or discomfort</b>         | <b>Pain or discomfort in arms or shoulder</b> | <b>Shortness of breath</b>              | <b>All five symptoms</b>                |
|   | Weighted %<br>(95% Confidence Interval)              | Weighted %<br>(95% Confidence Interval)    | Weighted %<br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval)       | Weighted %<br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval) |
| <b>Has cognitive impairment</b>         | 69.7<br>(65.6, 73.8)                                 | 74.9<br>(71.1, 78.7)                       | 91.0<br>(88.5, 93.5)                    | 85.7<br>(82.6, 88.8)                          | 85.2<br>(82.1, 88.4)                    | 69.7<br>(65.6, 73.8)                    |
| <b>No cognitive impairment</b>          | 75.6<br>(74.5, 76.7)                                 | 78.0<br>(77.0, 79.0)                       | 92.4<br>(91.7, 93.1)                    | 90.4<br>(89.7, 91.1)                          | 87.9<br>(87.1, 88.7)                    | 78.9<br>(77.9, 79.9)                    |

<sup>1</sup> Survey weights in the National Health Interview Survey have been used to obtain the weighted percentages.

**Online supplementary Table 2a:** Unadjusted prevalence of stroke symptoms recognition in the United States by cognitive impairment status stratified by stroke history

|  | <b>Had a stroke</b>                         |   |  |  |  |   |
|--|---|---|--|--|--|---|
|  | <b>Stroke symptom recognition</b>           |   |  |  |  |   |
|  | <b>Sudden confusion or trouble speaking</b> | <b>Sudden numbness or weakness of face, arm, or leg, especially on one side</b> | <b>Sudden trouble seeing in one or both eyes</b> | <b>Sudden trouble walking, dizziness, or loss of balance</b> | <b>Severe headache with no known cause</b> | <b>All five symptoms</b>                |
|  | Weighted %<br>(95% Confidence Interval)     | Weighted %<br>(95% Confidence Interval)   | Weighted %<br>(95% Confidence Interval)          | Weighted %<br>(95% Confidence Interval)                      | Weighted %<br>(95% Confidence Interval)    | Weighted %<br>(95% Confidence Interval) |
| <b>Has cognitive impairment (n = 224)</b>  | 89.8<br>(85.8, 93.8)                        | 92.1<br>(88.6, 95.6)  | 79.7<br>(74.4, 85.0)                             | 91.2<br>(87.5, 94.9)   | 76.9<br>(71.4, 82.4)                       | 64.4<br>(58.1, 70.7)                    |
| <b>No cognitive impairment (n = 778)</b>   | 95.8<br>(94.4, 97.2)                        | 96.0<br>(94.6, 97.4)  | 85.9<br>(83.5, 88.3)                             | 94.1<br>(92.4, 95.8)   | 83.9<br>(81.3, 86.5)                       | 77.6<br>(74.8, 80.6)                    |
|  | <b>Never had a stroke</b>                   |   |  |  |  |   |
|  | <b>Stroke symptom recognition</b>           |   |  |  |  |   |
|  | <b>Sudden confusion or trouble speaking</b> | <b>Sudden numbness or weakness of face, arm, or leg, especially on one side</b> | <b>Sudden trouble seeing in one or both eyes</b> | <b>Sudden trouble walking, dizziness, or loss of balance</b> | <b>Severe headache with no known cause</b> | <b>All five symptoms</b>                |
|  | Weighted %<br>(95% Confidence Interval)     | Weighted %<br>(95% Confidence Interval)   | Weighted %<br>(95% Confidence Interval)          | Weighted %<br>(95% Confidence Interval)                      | Weighted %<br>(95% Confidence Interval)    | Weighted %<br>(95% Confidence Interval) |
| <b>Has cognitive impairment (n = 767)</b>  | 92.5<br>(90.6, 94.4)                        | 92.5<br>(90.6, 94.4)  | 79.3<br>(76.4, 82.2)                             | 87.6<br>(85.3, 89.9)   | 78.2<br>(75.3, 81.1)                       | 69.3<br>(66.0, 72.6)                    |
| <b>No cognitive impairment (n = 10861)</b> | 94.8<br>(94.4, 95.2)                        | 95.6<br>(95.2, 96.0)  | 86.4<br>(85.8, 87.0)                             | 93.1<br>(92.6, 93.6)   | 84.5<br>(83.8, 85.2)                       | 77.9<br>(77.1, 78.7)                    |

**Online supplementary Table 2b:** Unadjusted prevalence of heart attack symptoms recognition in the United States by cognitive impairment status stratified by heart attack history

|  | <b>Had a heart attack</b>                            |  |   |   |   |   |
|--|--|--|---|---|---|---|
|  | <b>Heart attack symptom recognition</b>              |  |   |   |   |   |
|  | <b>Jaw, neck, or back pain</b>                       | <b>Feeling weak, lightheaded, or faint</b> | <b>Chest pain or discomfort</b>         | <b>Pain or discomfort in arms or shoulder</b> | <b>Shortness of breath</b>              | <b>All five symptoms</b>                |
|  | Weighted % <sup>2</sup><br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval)    | Weighted %<br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval)       | Weighted %<br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval) |
| <b>Has cognitive impairment (n = 146)</b>  | 79.9<br>(73.4, 86.4)                                 | 76.4<br>(69.5, 83.3)                       | 94.1<br>(90.3, 97.9)                    | 89.1<br>(84.0, 94.2)                          | 87.1<br>(81.7, 92.5)                    | 62.6<br>(54.8, 70.4)                    |
| <b>No cognitive impairment (n = 1021)</b>  | 77.3<br>(74.7, 79.9)                                 | 79.0<br>(76.5, 81.5)                       | 95.3<br>(94.0, 96.6)                    | 90.6<br>(88.8, 92.4)                          | 88.9<br>(87.0, 90.8)                    | 63.7<br>(60.8, 66.6)                    |
|  | <b>Never had a heart attack</b>                      |  |   |   |   |   |
|  | <b>Heart attack symptom recognition</b>              |  |   |   |   |   |
|  | <b>Jaw, neck, or back pain</b>                       | <b>Feeling weak, lightheaded, or faint</b> | <b>Chest pain or discomfort</b>         | <b>Pain or discomfort in arms or shoulder</b> | <b>Shortness of breath</b>              | <b>All five symptoms</b>                |
|  | Weighted % <sup>3</sup><br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval)    | Weighted %<br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval)       | Weighted %<br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval) |
| <b>Has cognitive impairment (n = 845)</b>  | 68.0<br>(64.9, 71.1)                                 | 75.2<br>(72.3, 78.1)                       | 89.5<br>(87.4, 91.6)                    | 84.2<br>(81.7, 86.7)                          | 84.6<br>(82.2, 87.0)                    | 55.4<br>(52.0, 58.8)                    |
| <b>No cognitive impairment (n = 10618)</b> | 74.5<br>(73.7, 75.3)                                 | 77.7<br>(76.9, 78.5)                       | 91.5<br>(91.0, 92.0)                    | 89.5<br>(88.9, 90.1)                          | 86.9<br>(86.3, 87.5)                    | 63.2<br>(62.3, 64.1)                    |

<sup>2</sup> Survey weights in the National Health Interview Survey have been used to obtain the weighted percentages.

<sup>3</sup> Survey weights in the National Health Interview Survey have been used to obtain the weighted percentages.

**Online Supplementary Table 3a:** Unadjusted prevalence of stroke and heart attack symptoms recognition in the United States by cognitive impairment status when “don’t know” responses categorized as “No” responses

|                                 | <b>Stroke symptom recognition</b>                    |   |  |  |  |   |
|---------------------------------|--|---|--|--|--|---|
|                                 | <b>Sudden confusion or trouble speaking</b>          | <b>Sudden numbness or weakness of face, arm, or leg, especially on one side</b> | <b>Sudden trouble seeing in one or both eyes</b> | <b>Sudden trouble walking, dizziness, or loss of balance</b> | <b>Severe headache with no known cause</b> | <b>All five symptoms</b>                |
|                                 | Weighted % <sup>4</sup><br>(95% Confidence Interval) | Weighted %<br>(95% Confidence Interval)   | Weighted %<br>(95% Confidence Interval)          | Weighted %<br>(95% Confidence Interval)                      | Weighted %<br>(95% Confidence Interval)    | Weighted %<br>(95% Confidence Interval) |
| <b>Has cognitive impairment</b> | 86.6<br>(84.7, 88.5)                                 | 87.2<br>(85.3, 89.1)  | 71.4<br>(68.8, 73.9)                             | 83.7<br>(81.6, 85.7)   | 70.1<br>(67.5, 72.6)                       | 59.1<br>(56.3, 61.8)                    |
| <b>No cognitive impairment</b>  | 93.3<br>(92.9, 93.7)                                 | 93.7<br>(93.3, 94.2)  | 80.7<br>(80.1, 81.4)                             | 90.8<br>(90.3, 91.3)   | 78.9<br>(78.2, 79.6)                       | 70.1<br>(69.3, 70.8)                    |
|                                 | <b>Heart attack symptom recognition</b>              |   |  |  |  |   |
|                                 | <b>Jaw, neck, or back pain</b>                       | <b>Feeling weak, lightheaded, or faint</b>                                      | <b>Chest pain or discomfort</b>                  | <b>Pain or discomfort in arms or shoulder</b>                | <b>Shortness of breath</b>                 | <b>All five symptoms</b>                |
|                                 | Weighted %<br>(95% Confidence Interval)              | Weighted %<br>(95% Confidence Interval)   | Weighted %<br>(95% Confidence Interval)          | Weighted %<br>(95% Confidence Interval)                      | Weighted %<br>(95% Confidence Interval)    | Weighted %<br>(95% Confidence Interval) |
| <b>Has cognitive impairment</b> | 63.5<br>(60.8, 66.2)                                 | 69.4<br>(66.8, 72.0)  | 86.6<br>(84.7, 88.5)                             | 78.8<br>(76.5, 81.1)   | 79.1<br>(76.8, 81.4)                       | 49.6<br>(46.8, 52.4)                    |
| <b>No cognitive impairment</b>  | 71.4<br>(70.7, 72.2)                                 | 73.6<br>(72.9, 74.4)  | 90.8<br>(90.3, 91.3)                             | 87.7<br>(87.1, 88.3)   | 84.6<br>(84.0, 85.2)                       | 57.8<br>(57.0, 58.7)                    |

<sup>4</sup> Survey weights in the National Health Interview Survey have been used to obtain the weighted percentages.

**Online Supplementary Table 3b:** Adjusted estimates of stroke and heart attack symptoms recognition by cognitive impairment status when “don’t know” responses categorized as “No” responses

|   | <b>Stroke symptom recognition</b>           |   |  |  |  |                                      |
|---|---|---|--|--|--|--------------------------------------|
|   | <b>Sudden confusion or trouble speaking</b> | <b>Sudden numbness or weakness of face, arm, or leg, especially on one side</b> | <b>Sudden trouble seeing in one or both eyes</b> | <b>Sudden trouble walking, dizziness, or loss of balance</b> | <b>Severe headache with no known cause</b> | <b>All five symptoms</b>             |
|   | Odds Ratio (95% Confidence Interval)        | Odds Ratio (95% Confidence Interval)  | Odds Ratio (95% Confidence Interval)             | Odds Ratio (95% Confidence Interval)                         | Odds Ratio (95% Confidence Interval)       | Odds Ratio (95% Confidence Interval) |
| <b>Cognitive Impairment status (ref: No cognitive impairment)</b> |   |   |  |  |  |                                      |
| Has cognitive impairment  | 0.66 (0.53, 0.84)                           | 0.68 (0.54, 0.85)   | 0.76 (0.64, 0.91)                                | 0.72 (0.59, 0.87)  | 0.74 (0.63, 0.87)                          | 0.76 (0.65, 0.88)                    |
|   | <b>Heart attack symptom recognition</b>     |   |  |  |  |                                      |
|   | <b>Jaw, neck, or back pain</b>              | <b>Feeling weak, lightheaded, or faint</b>                                      | <b>Chest pain or discomfort</b>                  | <b>Pain or discomfort in arms or shoulder</b>                | <b>Shortness of breath</b>                 | <b>All five symptoms</b>             |

|   | Odds Ratio <sup>5</sup><br>(95%<br>Confidence<br>Interval) | Odds Ratio<br>(95%<br>Confidence<br>Interval) | Odds Ratio<br>(95%<br>Confidence<br>Interval) | Odds Ratio<br>(95%<br>Confidence<br>Interval) | Odds Ratio<br>(95%<br>Confidence<br>Interval) | Odds Ratio<br>(95%<br>Confidence<br>Interval) |
|---|--|---|---|---|---|---|
| <b>Cognitive<br/>Impairment<br/>status (ref: No<br/>cognitive<br/>impairment)</b> |  |   |   |   |   |   |
| Has cognitive<br>impairment   | 0.87<br>(0.75, 1.01)                                       | 0.99<br>(0.84, 1.16)                          | 0.91<br>(0.73, 1.12)                          | 0.73<br>(0.61, 0.87)                          | 0.90<br>(0.76, 1.07)                          | 0.88<br>(0.76, 1.01)                          |

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<sup>5</sup>Logistic models had NHIS survey weighting applied to them and included cognitive impairment status, age, sex, race, % of poverty line, and education as covariates.

## **NHIS data processing**

This Table outlines in which data file all the variables used in the study can be found in.

| <b>Variable</b>   | <b>File</b> | <b>Categories</b>   |
|---|-------------|---|
| <b>Heart attack symptoms</b>  |             |   |
| Jaw, neck, or back pain: JAWP (2014, 2017)  | Adult       | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9  |
| Feeling weak, lightheaded, or faint: WEA (2014, 2017)                                       | Adult       | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9  |
| Chest pain or discomfort: CHE (2014, 2017)  | Adult       | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9  |
| Pain or discomfort in arms or shoulder: ARM (2014, 2017)                                    | Adult       | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9  |
| Shortness of breath: BRTH (2014, 2017)  | Adult       | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9  |
| <b>Stroke symptoms</b>  |             |   |
| Sudden numbness or weakness of face, arm, or leg, especially on one side: FACE (2014, 2017) | Adult       | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9  |
| Sudden confusion or trouble speaking: SPEAKING (2014, 2017)                                 | Adult       | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9  |
| Sudden trouble seeing in one or both eyes: EYE (2014, 2017)                                 | Adult       | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9  |
| Sudden trouble walking, dizziness, or loss of balance: WALKING (2014, 2017)                 | Adult       | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9  |
| Severe headache with no known cause: HEADACHE (2014, 2017)                                  | Adult       | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9  |
| <b>Cognitive impairment</b>   |             |   |
| <u>In the person file</u>   | Person      | <u>In the person file</u><br>PLAREMEM: 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9 |



|  |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
|--|--------|--|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|---------------------------------------|------------------------------------|--------------------------------------|---------------------------|
| Is - - limited by difficulty remembering?: (PLAREMEM (2014, 2017)) |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| <b>Sociodemographic factors</b>                                    |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| Sex: SEX (2014, 2017)  | Person | <u>Variable Codes</u><br>1=Male<br>2=Female  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| Age: AGE_P (2014, 2017)  | Person | 65-74y, 75-84y, 85+<br><br><u>Variable Codes</u><br>00=Under 1<br>01-84=1-84 years<br>85=85+ years   |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| Race: HISCODI3 (2014, 2017)  | Person | <u>Variable Codes</u><br>1=Hispanic<br>2=Non-Hispanic White,<br>3=Non-Hispanic Black<br>4=Non-Hispanic Asian<br>5=Non-Hispanic All other race groups<br>*You should combine 4 and 5 to make just Other (Non-Hispanic Asian, Non-Hispanic All other race groups) so less categories   |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| Poverty Line: RAT_CAT4 (2014, 2017)                                | Family | <u>Variable Codes</u> <table border="1"> <tr><td>01=Under 0.50</td></tr> <tr><td>02=0.50 - 0.74</td></tr> <tr><td>03=0.75 - 0.99</td></tr> <tr><td>04=1.00 - 1.24</td></tr> <tr><td>05=1.25 - 1.49</td></tr> <tr><td>06=1.50 - 1.74</td></tr> <tr><td>07=1.75 - 1.99</td></tr> <tr><td>08=2.00 - 2.49</td></tr> <tr><td>09=2.50 - 2.99</td></tr> <tr><td>10=3.00 - 3.49</td></tr> <tr><td>11=3.50 - 3.99</td></tr> <tr><td>12=4.00 - 4.49</td></tr> <tr><td>13=4.50 - 4.99</td></tr> <tr><td>14=5.00 and over</td></tr> <tr><td>15=Less than 1.00 (no further detail)</td></tr> <tr><td>16=1.00 - 1.99 (no further detail)</td></tr> <tr><td>17=2.00 and over (no further detail)</td></tr> <tr><td>96=Undefinable 99 Unknown</td></tr> </table> <p>*Please recode this as:</p> <ul style="list-style-type: none"> <li>• &lt;100% (01=Under 0.50; 02=0.50 - 0.74; 03=0.75 - 0.99; 15=Less than 1.00 (no further detail))</li> <li>• 100-199% (04=1.00 - 1.24; 05=1.25 - 1.49; 06=1.50 - 1.74; 07=1.75 - 1.99; 16=1.00 - 1.99 (no further detail))</li> <li>• 200-299% (08=2.00 - 2.49; 09=2.50 - 2.99)</li> </ul> | 01=Under 0.50 | 02=0.50 - 0.74 | 03=0.75 - 0.99 | 04=1.00 - 1.24 | 05=1.25 - 1.49 | 06=1.50 - 1.74 | 07=1.75 - 1.99 | 08=2.00 - 2.49 | 09=2.50 - 2.99 | 10=3.00 - 3.49 | 11=3.50 - 3.99 | 12=4.00 - 4.49 | 13=4.50 - 4.99 | 14=5.00 and over | 15=Less than 1.00 (no further detail) | 16=1.00 - 1.99 (no further detail) | 17=2.00 and over (no further detail) | 96=Undefinable 99 Unknown |
| 01=Under 0.50  |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 02=0.50 - 0.74   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 03=0.75 - 0.99   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 04=1.00 - 1.24   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 05=1.25 - 1.49   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 06=1.50 - 1.74   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 07=1.75 - 1.99   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 08=2.00 - 2.49   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 09=2.50 - 2.99   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 10=3.00 - 3.49   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 11=3.50 - 3.99   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 12=4.00 - 4.49   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 13=4.50 - 4.99   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 14=5.00 and over   |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 15=Less than 1.00 (no further detail)                              |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 16=1.00 - 1.99 (no further detail)                                 |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 17=2.00 and over (no further detail)                               |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |
| 96=Undefinable 99 Unknown  |        |  |               |                |                |                |                |                |                |                |                |                |                |                |                |                  |                                       |                                    |                                      |                           |

|   |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
|---|--------|---|---------------------------------|---|-------------------|-------------------------|----------------------------------|--|--|---|--|--|---|---------------|
|   |        | <ul style="list-style-type: none"> <li>• 300-399% (10=3.00 - 3.49; 11=3.50 - 3.99)</li> <li>• &gt;400% (12=4.00 - 4.49; 14=5.00 and over)</li> </ul> <p>*Exclude 96=Undefinable 99 Unknown</p>  |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| Education:<br>FM_EDUC1<br>(2014, 2017)                                      | Family | <p>Variable Codes</p> <table border="1"> <tr><td>01=Less than/equal to 8th grade</td></tr> <tr><td>02=9-12th grade, no high school diploma</td></tr> <tr><td>03=GED recipient</td></tr> <tr><td>04=High school graduate</td></tr> <tr><td>05=Some college, no degree</td></tr> <tr><td>06=AA degree, technical or vocational</td></tr> <tr><td>07=AA degree, academic program</td></tr> <tr><td>08=Bachelor's degree (BA, BS, AB, BBA)</td></tr> <tr><td>09=Master's, professional, or doctoral degree</td></tr> <tr><td>97=Refused</td></tr> <tr><td>98=Not ascertained</td></tr> <tr><td>99=Don't know</td></tr> </table> <p>*Please recode this as:</p> <ul style="list-style-type: none"> <li>• Less than high school (01=Less than/equal to 8th grade; 02=9-12th grade, no high school diploma)</li> <li>• High school graduate (03=GED recipient; 04=High school graduate)</li> <li>• Some college (05=Some college, no degree; 06=AA degree, technical or vocational; 07=AA degree, academic program)</li> <li>• College graduate (08=Bachelor's degree (BA, BS, AB, BBA), 09=Master's, professional, or doctoral degree)</li> </ul> <p>*Exclude (97=Refused, 98=Not ascertained, 99=Don't know)</p> | 01=Less than/equal to 8th grade | 02=9-12th grade, no high school diploma | 03=GED recipient  | 04=High school graduate | 05=Some college, no degree       | 06=AA degree, technical or vocational                      | 07=AA degree, academic program                             | 08=Bachelor's degree (BA, BS, AB, BBA)            | 09=Master's, professional, or doctoral degree                            | 97=Refused   | 98=Not ascertained  | 99=Don't know |
| 01=Less than/equal to 8th grade   |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 02=9-12th grade, no high school diploma                                     |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 03=GED recipient  |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 04=High school graduate   |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 05=Some college, no degree  |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 06=AA degree, technical or vocational                                       |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 07=AA degree, academic program  |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 08=Bachelor's degree (BA, BS, AB, BBA)                                      |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 09=Master's, professional, or doctoral degree                               |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 97=Refused  |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 98=Not ascertained  |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 99=Don't know   |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| <b>Stratification Variables</b>   |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| Living arrangement:<br>FM_STRCP (2014, 2017)                                | Family | <p>Categorize Living alone (11) , Lives with others (12, 21, 22, 23, 31, 32, 33, 41, 42, 43, 44, 45), Exclude 99</p> <table border="1"> <tr><td>11 Living alone</td></tr> <tr><td>12 Living with roommate(s)</td></tr> <tr><td>21 Married couple</td></tr> <tr><td>22 Unmarried couple</td></tr> <tr><td>23 All other adult-only families</td></tr> <tr><td>31 Mother and biological or non-biological child(ren) only</td></tr> <tr><td>32 Father and biological or non-biological child(ren) only</td></tr> <tr><td>33 All other single-adult and child(ren) families</td></tr> <tr><td>41 Married or unmarried parents with biological/adoptive child(ren) only</td></tr> <tr><td>42 Parent (biological or adoptive), step parent, and child(ren) only</td></tr> <tr><td>43 Parent (biological or adoptive), cohabiting partner, and child(ren) only</td></tr> </table>  | 11 Living alone                 | 12 Living with roommate(s)              | 21 Married couple | 22 Unmarried couple     | 23 All other adult-only families | 31 Mother and biological or non-biological child(ren) only | 32 Father and biological or non-biological child(ren) only | 33 All other single-adult and child(ren) families | 41 Married or unmarried parents with biological/adoptive child(ren) only | 42 Parent (biological or adoptive), step parent, and child(ren) only | 43 Parent (biological or adoptive), cohabiting partner, and child(ren) only |               |
| 11 Living alone   |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 12 Living with roommate(s)  |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 21 Married couple   |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 22 Unmarried couple   |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 23 All other adult-only families  |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 31 Mother and biological or non-biological child(ren) only                  |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 32 Father and biological or non-biological child(ren) only                  |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 33 All other single-adult and child(ren) families                           |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 41 Married or unmarried parents with biological/adoptive child(ren) only    |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 42 Parent (biological or adoptive), step parent, and child(ren) only        |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |
| 43 Parent (biological or adoptive), cohabiting partner, and child(ren) only |        |   |                                 |   |                   |                         |                                  |  |  |   |  |  |   |               |

|   |       |  |
|---|-------|--|
|   |       | 44 At least 1 (biological or adoptive) parent and 1+ child(ren), and other related adults    |
|   |       | 45 Other related and/or unrelated adults, 1+ child(ren), no biological or adoptive parent(s) |
|   |       | 99 Unknown   |
| Stroke history: STREV (2014, 2017)      | Adult | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9                     |
| Heart attack history: MIEV (2014, 2017) | Adult | 1=Yes,2=No, 7=Refused, 8=Not ascertained, 9=Don't Know<br>*Exclude 7,8,9                     |

| Cognitive impairment  | N     | Weighted % <sup>6</sup><br>(95% Confidence Interval) |
|---|-------|--|
| Yes   | 1345  | 8.3 (7.9, 8.8)                                       |
| No  | 14627 | 91.6 (91.2, 92.0)                                    |
| Missing (Includes Refused, Not Ascertained, and Don't Know) | 6     | 0.04 (~0, 0.09)                                      |

**Stroke and heart attack symptoms recognition for individuals  $\geq 65$  years with cognitive impairment information in the 2014 and 2017 NHIS surveys**

| Symptom   | n     | Weighted % <sup>7</sup> |
|---|-------|-------------------------|
| Stroke Symptoms   |       |                         |
| <b>Sudden confusion or trouble speaking</b>                                     |       |                         |
| Yes   | 14713 | 92.4                    |
| No  | 822   | 5.0                     |
| Missing (includes Refused, Not ascertained, and Don't Know)                     | 437   | 2.6                     |
| <b>Sudden numbness or weakness of face, arm, or leg, especially on one side</b> |       |                         |
| Yes   | 14798 | 92.8                    |
| No  | 715   | 4.4                     |
| Missing (includes Refused, Not ascertained, and Don't Know)                     | 459   | 2.8                     |
| <b>Sudden trouble seeing in one or both eyes</b>                                |       |                         |
| Yes   | 12642 | 79.5                    |
| No  | 2141  | 13.2                    |

<sup>6</sup>Survey weights in the National Health Interview Survey have been used to obtain the weighted percentages.

<sup>7</sup>Survey weights in the National Health Interview Survey have been used to obtain the weighted percentages.

|  |       |      |
|--|-------|------|
| Missing (includes Refused, Not ascertained, and Don't Know)  | 1189  | 7.3  |
| <b>Sudden trouble walking, dizziness, or loss of balance</b> |       |      |
| Yes  | 14308 | 89.7 |
| No   | 1110  | 6.9  |
| Missing (includes Refused, Not ascertained, and Don't Know)  | 554   | 3.4  |
| <b>Severe headache with no known cause</b>                   |       |      |
| Yes  | 12348 | 77.6 |
| No   | 2520  | 15.6 |
| Missing (includes Refused, Not ascertained, and Don't Know)  | 1104  | 6.8  |
| <b>Heart attack Symptoms</b>                                 |       |      |
| <b>Jaw, neck, or back pain</b>                               |       |      |
| Yes  | 11254 | 70.4 |
| No   | 3975  | 25.0 |
| Missing (includes Refused, Not ascertained, and Don't Know)  | 743   | 4.6  |
| <b>Feeling weak, lightheaded, or faint</b>                   |       |      |
| Yes  | 11655 | 72.8 |
| No   | 3541  | 22.4 |
| Missing (includes Refused, Not ascertained, and Don't Know)  | 776   | 4.8  |
| <b>Chest pain or discomfort</b>                              |       |      |
| Yes  | 14394 | 90.1 |
| No   | 1279  | 8.1  |
| Missing (includes Refused, Not ascertained, and Don't Know)  | 299   | 1.8  |
| <b>Pain or discomfort in arms or shoulder</b>                |       |      |
| Yes  | 13799 | 86.6 |
| No   | 1731  | 10.7 |
| Missing (includes Refused, Not                               | 442   | 2.7  |

|   |       |      |
|---|-------|------|
| ascertained, and Don't Know)                                |       |      |
| <b>Shortness of breath</b>                                  |       |      |
| Yes   | 13357 | 83.7 |
| No  | 2073  | 12.9 |
| Missing (includes Refused, Not ascertained, and Don't Know) | 542   | 3.4  |

**For individuals  $\geq 65$  years with cognitive impairment and stroke and heart attack symptoms recognition information in the 2014 and 2017 NHIS surveys**

| Income Categories                          | n          | Weighted % <sup>8</sup><br>(95% Confidence Interval) |
|--|------------|--|
| <100%                                      | 1626       | 11.0; 9.6  |
| 100-199%                                   | 3561       | 24.1; 21.3   |
| 200-299%                                   | 2269; 2792 | 15.8; 17.5   |
| 300-399%                                   | 1619; 1971 | 11.4; 12.5   |
| >400%                                      | 3906; 4755 | 28.5; 31.0   |
| Missing (includes undefinable and unknown) | 1267       | 9.1; 8.1   |

| Covariates                         | $\geq 65$ years with cognitive impairment and stroke and heart attack symptoms recognition information<br>(n = 13637) |  |
|------------------------------------|---|--|
|                                    | n   | Weighted % <sup>9</sup><br>(95% Confidence Interval) |
| <b>Sex</b>                         |   |  |
| Male                               | 5603  | 40.9 (40.1, 41.7)                                    |
| Female                             | 8034  | 59.1 (58.3, 59.9)                                    |
| Missing                            | 0   | 0  |
| <b>Race</b>                        |   |  |
| White                              | 10421   | 78.8 (78.1, 79.5)                                    |
| Black                              | 1472  | 9.7 (9.2, 10.2)                                      |
| Hispanic                           | 1078  | 7.5 (7.1, 7.9)                                       |
| Other Race                         | 554   | 3.5 (3.2, 3.8)                                       |
| Missing                            | 112   | 0.6 (0.5, 0.7)                                       |
| <b>% of Poverty Line (imputed)</b> |   |  |
| <100%                              | 1303  | 9.1 (8.6, 9.6)                                       |
| 100-199%                           | 2992  | 20.9 (20.2, 21.6)                                    |
| 200-299%                           | 2397  | 17.5 (16.9, 18.1)                                    |
| 300-399%                           | 1744  | 12.9 (12.3, 13.5)                                    |
| >400%                              | 4230  | 32.4 (31.6, 33.2)                                    |
| Missing (Undefinable and Unknown)  | 971   | 7.3 (6.9, 7.7)                                       |
| <b>Education</b>                   |   |  |

<sup>8</sup>Survey weights in the National Health Interview Survey have been used to obtain the weighted percentages.

<sup>9</sup>Survey weights in the National Health Interview Survey have been used to obtain the weighted percentages.

|                             |       |                   |
|-----------------------------|-------|-------------------|
| Less than high school       | 1699  | 11.8 (11.3, 12.3) |
| High school graduate        | 3281  | 23.7 (23.0, 24.4) |
| Some college                | 3922  | 28.4 (27.6, 29.2) |
| College graduate            | 4701  | 35.9 (35.1, 36.7) |
| Missing ()                  | 34    | 0.3 (0.2, 0.4)    |
| <b>Living arrangement</b>   |       |                   |
| Lives alone                 | 6542  | 47.4 (46.6, 48.2) |
| Lives with others           | 7185  | 52.6 (51.8, 53.4) |
| <b>Stroke history</b>       |       |                   |
| Had a stroke                | 1079  | 8.0 (7.5, 8.5)    |
| Never had a stroke          | 12539 | 91.9 (91.4, 92.4) |
| Missing                     | 19    | 0.1 (0.05, 0.2)   |
| <b>Heart attack history</b> |       |                   |
| Had a heart attack          | 1255  | 8.9 (8.4, 9.4)    |
| Never had a heart attack    | 12367 | 90.9 (90.4, 91.4) |
| Missing                     | 15    | 0.1 (0.05, 0.2)   |