**Supplemental materials**

Inverse probability weighting

The non-stabilized weights were constructed as the reciprocal of the product of 3 probabilities: (1) the probability of study participation at baseline, (2) the probability of having a non-proxy baseline interview, and (3) the probability of participating in the outcome interview. We selected predictors of each attrition step using stepwise logistic regression models. The probability of study participation at baseline among 1793 patients who survived 90 days post-stroke (Supplemental Table S1) was modeled as a function of age (linear and quadratic terms), race/ethnicity, stroke severity (log-transformed NIHSS score and log-transformed, history of congestive heart failure and current smoking at baseline. The probability of having a non-proxy baseline interview among 1367 participants who completed the baseline interview (Supplemental Table S2) was modeled as a function of age, health insurance status, stroke type, stroke severity, functional and cognitive impairment at baseline, history of dementia, atrial fibrillation and cancer, and excessive drinking behavior. The probability of participating in the outcome interview among 1066 participants who completed non-proxy baseline interview (Supplemental Table S3) was modeled as a function of sex, educational attainment, health insurance status, stroke severity and cognitive impairment at baseline.

Stabilized weights were generated by multiplying the non-stabilized weights by probabilities generated using a subset of predictors described above (sociodemographic factors). Weights were trimmed at the 1st and 99th percentiles. The overall weights ranged from 0.63 to 3.15, with a mean of 0.98.

Table S1. Sample characteristics by study participation at baseline among 1793 patients who survived 90 days post-stroke, Brain Attack Surveillance in Corpus Christi project, United States, 2011-2016

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Total (n=1793)  | Participated(n= 1367) | Not participated (n=426) | *p* Value |
| **Sociodemographic characteristics** |  |  |  |  |
| Sex |  |  |  | 0.611 |
|  Men | 953(53.1) | 722(52.8) | 231(54.2) |  |
|  Women | 840(46.9) | 645(47.2) | 195(45.8) |  |
| Age | 67.7 ± 12.4 | 67.4 ± 12.2 | 68.5 ± 12.9 | 0.121 |
| Age |  |  |  | 0.115 |
|  <65 | 787 (43.9) | 610 (44.6) | 177 (41.6) |  |
|  65-79 | 636 (35.5) | 490 (35.8) | 146 (34.3) |  |
|  ≥80 | 370 (20.6) | 267 (19.5) | 103 (24.2) |  |
| Race/ethnicity |  |  |  | 0.005 |
|  Non-Hispanic white | 660 (36.8) | 475 (34.8) | 185 (43.4) |  |
|  Mexican American  | 1002 (55.9) | 791 (57.9) | 211 (49.5) |  |
|  Other | 131 (7.3) | 101 (7.4) | 30 (7.0) |  |
| Health insurance status |  |  |  | 0.563 |
|  Insured | 1584 (88.3) | 1211 (88.6) | 373 (87.6) |  |
|  Uninsured  | 209 (11.7) | 156 (11.4) | 53 (12.4) |  |
| **Stroke characteristics**  |  |  |  |  |
| Stroke typea |  |  |  | 0.282 |
|  Ischemic stroke | 1585 (88.7) | 1203 (88.2) | 382 (90.1) |  |
|  Intracerebral hemorrhage stroke | 203 (11.4) | 161 (11.8) | 42 (9.9) |  |
| Stroke severity (NIHSS)a | 5.3 ± 6.4 | 5.4 ± 6.4 | 5.1 ± 6.5 | 0.020 |
| **Pre-stroke characteristics** |  |  |  |  |
| Number of medical conditions | 2.4 ± 1.5 | 2.5 ± 1.5 | 2.4 ± 1.5 | 0.411 |
| Cardiovascular risk factors |  |  |  |  |
|  Coronary artery disease  | 441 (24.6) | 333 (24.4) | 108 (25.4) | 0.678 |
|  Atrial fibrillation  | 207 (11.5) | 158 (11.6) | 49 (11.5) | 0.975 |
|  Congestive heart failure  | 132 (7.4) | 93 (6.8) | 39 (9.2) | 0.105 |
|  Hypertension  | 1413 (78.8) | 1085 (79.4) | 328 (77.0) | 0.295 |
|  Diabetes  | 807 (45.0) | 613 (44.8) | 194 (45.5) | 0.801 |
|  High cholesterol  | 796 (44.4) | 621 (45.4) | 175 (41.1) | 0.115 |
| Health risk behaviors |  |  |  |  |
|  Current smokinga  | 415 (24.6) | 306 (24) | 109 (26.7) | 0.261 |
|  Excessive alcohol use  | 150 (8.4) | 110 (8.1) | 40 (9.4) | 0.382 |
|  Obesity (body mass index≥30)a  | 666 (37.3) | 521 (38.3) | 145 (34.1) | 0.121 |

Abbreviations: NIHSS = NIH Stroke Scale; SD = standard deviation.

Values are mean ± SD or n (%).

aVariables with missing data. The numbers of missing values were 108 for current smoking, 7 for obesity, 5 for stroke type and 5 for stroke severity.

Table S2. Sample characteristics by baseline interview type among 1367 participants who completed the baseline interview, Brain Attack Surveillance in Corpus Christi project, United States, 2011-2016

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Total (n=1367)  | Non-proxy interview(n= 1066) | Proxy interview (n=301) | *p* Value |
| **Sociodemographic characteristics** |  |  |  |  |
| Sex |  |  |  | 0.037 |
|  Men | 722 (52.8) | 579 (54.3) | 143 (47.5) |  |
|  Women | 645 (47.2) | 487 (45.7) | 158 (52.5) |  |
| Age | 67.4 ± 12.2 | 65.3 ± 11.3 | 74.7 ± 12.6 | <0.001 |
| Age  |  |  |  | <0.001 |
|  <65 | 610 (44.6) | 536 (50.3) | 74 (24.6) |  |
|  65-79 | 490 (35.8) | 386 (36.2) | 104 (34.6) |  |
|  ≥80 | 267 (19.5) | 144 (13.5) | 123 (40.9) |  |
| Race/ethnicity  |  |  |  | 0.287 |
|  Non-Hispanic white | 475 (34.8) | 381 (35.7) | 94 (31.2) |  |
|  Mexican American  | 791 (57.9) | 605 (56.8) | 186 (61.8) |  |
|  Other | 101 (7.4) | 80 (7.5) | 21 (7.0) |  |
| Educationa  |  |  |  | <0.001 |
|  Less than high school | 449 (33.1) | 325 (30.5) | 124 (42.3) |  |
|  High school and above | 909 (66.9) | 740 (69.5) | 169 (57.7) |  |
| Marital statusa  |  |  |  | <0.001 |
|  Married/partnered | 654 (48.0) | 514 (48.3) | 140 (46.8) |  |
|  Single  | 114 (8.4) | 102 (9.6) | 12 (4.0) |  |
|  Widowed | 305 (22.4) | 203 (19.1) | 102 (34.1) |  |
|  Separated/divorced | 291 (21.3) | 246 (23.1) | 45 (15.1) |  |
| Health insurance status |  |  |  | <0.001 |
|  Insured | 1211 (88.6) | 922 (86.5) | 289 (96.0) |  |
|  Uninsured  | 156 (11.4) | 144 (13.5) | 12 (4.0) |  |
| **Stroke characteristics**  |  |  |  |  |
| Stroke typea  |  |  |  | <0.001 |
|  Ischemic stroke | 1203 (88.2) | 970 (91.3) | 233 (77.4) |  |
|  Intracerebral hemorrhage stroke | 161 (11.8) | 93 (8.8) | 68 (22.6) |  |
| Stroke severity (NIHSS)a  | 5.4 ± 6.4 | 4.1 ± 4.8 | 10.0 ± 8.9 | <0.001 |
| **Pre-stroke characteristics** |  |  |  |  |
| Disability (mRS)a  |  |  |  | <0.001 |
|  No disability (0-1) | 634 (47.6) | 548 (52.5) | 86 (29.8) |  |
|  Slight/moderate disability (2-3)  | 584 (43.8) | 442 (42.3) | 142 (49.1) |  |
|  Moderately severe/severe disability (4-5) | 115 (8.6) | 54 (5.2) | 61 (21.1) |  |
| Cognitive function (IQCODE)a  | 3.2 ± 0.4 | 3.1 ± 0.3 | 3.3 ± 0.5 | <0.001 |
| Number of medical conditionsa  | 2.5 ± 1.5 | 2.4 ± 1.5 | 2.7 ± 1.6 | <0.001 |
| Cardiovascular risk factors |  |  |  |  |
|  Coronary artery disease  | 333 (24.4) | 247 (23.2) | 86 (28.6) | 0.054 |
|  Atrial fibrillation  | 158 (11.6) | 110 (10.3) | 48 (16.0) | 0.007 |
|  Congestive heart failure  | 93 (6.8) | 59 (5.5) | 34 (11.3) | <0.001 |
|  Hypertension  | 1085 (79.4) | 832 (78.1) | 253 (84.1) | 0.023 |
|  Diabetes  | 613 (44.8) | 483 (45.3) | 130 (43.2) | 0.514 |
|  High cholesterol  | 621 (45.4) | 491 (46.1) | 130 (43.2) | 0.377 |
| Health risk behaviors |  |  |  |  |
|  Current smokinga  | 306 (24.0) | 267 (26.7) | 39 (14.0) | <0.001 |
|  Excessive alcohol use  | 110 (8.1) | 87 (8.2) | 23 (7.6) | 0.770 |
|  Obesity (body mass index≥30)a  | 521 (38.3) | 433 (40.8) | 88 (29.4) | <0.001 |

Abbreviations: IQCODE = Informant Questionnaire on Cognitive Decline in the Elderly; mRS = modified Rankin Scale; NIHSS = NIH Stroke Scale; SD = standard deviation.

Values are mean ± SD or n (%).

aVariables with missing data. The numbers of missing values were 212 for pre-stroke cognitive function, 90 for current smoking, 34 for pre-stroke disability, 9 for education, 6 for obesity, 5 for stroke severity, 5 for stroke type and 3 for marital status.

Table S3. Sample characteristics by outcome interview participation among 1066 participants who completed non-proxy baseline interview, Brain Attack Surveillance in Corpus Christi project, United States, 2011-2016

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Total (n=1066)  | Participated(n= 818) | Not participated (n=248) | *p* Value |
| **Sociodemographic characteristics** |  |  |  |  |
| Sex  |  |  |  | 0.003 |
|  Men | 579 (54.3) | 424 (51.8) | 155 (62.5) |  |
|  Women | 487 (45.7) | 394 (48.2) | 93 (37.5) |  |
| Age  | 65.3 ± 11.3 | 65.6 ± 11.4 | 64.4 ± 11.1 | 0.129 |
| Age  |  |  |  | 0.605 |
|  <65 | 536 (50.3) | 405 (49.5) | 131 (52.8) |  |
|  65-79 | 386 (36.2) | 299 (36.6) | 87 (35.1) |  |
|  ≥80 | 144 (13.5) | 114 (13.9) | 30 (12.1) |  |
| Race/ethnicity  |  |  |  | 0.332 |
|  Non-Hispanic white | 381 (35.7) | 294 (35.9) | 87 (35.1) |  |
|  Mexican American | 605 (56.8) | 468 (57.2) | 137 (55.2) |  |
|  Other | 80 (7.5) | 56 (6.9) | 24 (9.7) |  |
| Educationa  |  |  |  | 0.075 |
|  Less than high school | 325 (30.5) | 238 (29.1) | 87 (35.1) |  |
|  High school and above | 740 (69.5) | 579 (70.9) | 161 (64.9) |  |
| Marital statusa  |  |  |  | 0.442 |
|  Married/partnered | 514 (48.3) | 393 (48.1) | 121 (48.8) |  |
|  Single  | 102 (9.6) | 76 (9.3) | 26 (10.5) |  |
|  Widowed | 203 (19.1) | 164 (20.1) | 39 (15.7) |  |
|  Separated/divorced | 246 (23.1) | 184 (22.5) | 62 (25.0) |  |
| Health insurance status  |  |  |  | 0.008 |
|  Insured | 922 (86.5) | 720 (88.0) | 202 (81.5) |  |
|  Uninsured  | 144 (13.5) | 98 (12.0) | 46 (18.6) |  |
| **Stroke characteristics**  |  |  |  |  |
| Stroke typea  |  |  |  | 0.371 |
|  Ischemic stroke | 970 (91.3) | 749 (91.7) | 221 (89.8) |  |
|  Intracerebral hemorrhage stroke | 93 (8.8) | 68 (8.3) | 25 (10.2) |  |
| Stroke severity (NIHSS)a  | 4.1 ± 4.8 | 4.1 ± 4.6 | 4.5 ± 5.2 | 0.387 |
| **Pre-stroke characteristics** |  |  |  |  |
| Depression statusa  |  |  |  | 0.093 |
|  No history of depression | 708 (67.2) | 530 (65.6) | 178 (72.4) |  |
|  History of depression | 170 (16.1) | 133 (16.5) | 37 (15.0) |  |
|  On medication for depression at the time of stroke  | 176 (16.7) | 145 (18.0) | 31 (12.6) |  |
| Disability (mRS)a  |  |  |  | 0.968 |
|  No disability (0-1) | 548 (52.5) | 419 (52.3) | 129 (53.1) |  |
|  Slight/moderate disability (2-3)  | 442 (42.3) | 340 (42.5) | 102 (42.0) |  |
|  Moderately severe/severe disability (4-5) | 54 (5.2) | 42 (5.2) | 12 (4.9) |  |
| Cognitive function (IQCODE)a  | 3.1 ± 0.3 | 3.1 ± 0.3 | 3.1 ± 0.3 | 0.067 |
| Number of medical conditions  | 2.4 ± 1.5 | 2.4 ± 1.5 | 2.3 ± 1.5 | 0.098 |
| Cardiovascular risk factors |  |  |  |  |
|  Coronary artery disease  | 247 (23.2) | 199 (24.3) | 48 (19.4) | 0.104 |
|  Atrial fibrillation  | 110 (10.3) | 87 (10.6) | 23 (9.3) | 0.537 |
|  Congestive heart failure  | 59 (5.5) | 45 (5.5) | 14 (5.7) | 0.931 |
|  Hypertension  | 832 (78.1) | 641 (78.4) | 191 (77.0) | 0.654 |
|  Diabetes  | 483 (45.3) | 373 (45.6) | 110 (44.4) | 0.730 |
|  High cholesterol  | 491 (46.1) | 391 (47.8) | 100 (40.3) | 0.039 |
| Health risk behaviors |  |  |  |  |
|  Current smokinga  | 267 (26.7) | 201 (26.3) | 66 (28.1) | 0.591 |
|  Excessive alcohol use  | 87 (8.2) | 62 (7.6) | 25 (10.1) | 0.208 |
|  Obesity (body mass index≥30)a  | 433 (40.8) | 340 (41.7) | 93 (37.7) | 0.255 |

Abbreviations: IQCODE = Informant Questionnaire on Cognitive Decline in the Elderly; mRS = modified Rankin Scale; NIHSS = NIH Stroke Scale; SD = standard deviation.

Values are mean ± SD or n (%).

aVariables with missing data. The numbers of missing values were 209 for pre-stroke cognitive function, 67 for current smoking, 22 for pre-stroke disability, 12 for pre-stroke depression status, 4 for obesity, 3 for stroke severity, 3 for stroke type, 1 for education, and 1 for marital status.

Table S4. Comparison by data availability of the baseline cognitive measure among 786 participants included in the final sample, Brain Attack Surveillance in Corpus Christi project, United States, 2011-2016

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Total (n=786)  | Complete(n= 652) | Missing (n=134) | *p* Value |
| **Sociodemographic characteristics** |  |  |  |  |
| Sex  |  |  |  | 0.372 |
|  Male | 403 (51.3) | 339 (52.0) | 64 (47.8) |  |
|  Female | 383 (48.7) | 313 (48.0) | 70 (52.2) |  |
| Age  | 65.4 ± 11.1 | 65.7 ± 11.2 | 63.7 ± 10.6 | 0.065 |
| Race/ethnicity  |  |  |  | 0.003 |
|  Non-Hispanic white | 285 (36.3) | 232 (35.6) | 53 (39.6) |  |
|  Mexican American  | 448 (57.0) | 384 (58.9) | 64 (47.8) |  |
|  Other | 53 (6.7) | 36 (5.5) | 17 (12.7) |  |
| Educationa  |  |  |  | 0.349 |
|  Less than high school | 227 (28.9) | 193 (29.6) | 34 (25.6) |  |
|  High school and above | 558 (71.1) | 459 (70.4) | 99 (74.4) |  |
| Marital statusa  |  |  |  | <0.001 |
|  Married/partnered | 380 (48.4) | 344 (52.8) | 36 (27.1) |  |
|  Single  | 75 (9.6) | 53 (8.1) | 22 (16.5) |  |
|  Widowed | 154 (19.6) | 127 (19.5) | 27 (20.3) |  |
|  Separated/divorced | 176 (22.4) | 128 (19.6) | 48 (36.1) |  |
| Health insurance status  |  |  |  | 0.229 |
|  Insured | 698 (88.8) | 583 (89.4) | 115 (85.8) |  |
|  Uninsured  | 88 (11.2) | 69 (10.6) | 19 (14.2) |  |
| **Stroke characteristics**  |  |  |  |  |
| Stroke typea  |  |  |  | 0.088 |
|  Ischemic stroke | 721 (91.9) | 593 (91.1) | 128 (95.5) |  |
|  Intracerebral hemorrhage stroke | 64 (8.2) | 58 (8.9) | 6 (4.5) |  |
| Stroke severity (NIHSS)a  | 3.9 ± 4.6 | 3.9 ± 4.5 | 4.2 ± 5.1 | 0.477 |
| **Pre-stroke characteristics**  |  |  |  |  |
| Depression statusa  |  |  |  | 0.174 |
|  No history of depression | 511 (65.9) | 432 (67.0) | 79 (60.3) |  |
|  History of depression | 125 (16.1) | 104 (16.1) | 21 (16.0) |  |
|  On medication for depression at the time of stroke  | 140 (18.0) | 109 (16.9) | 31 (23.7) |  |
| Disability (mRS)a  |  |  |  | 0.263 |
|  No disability (0-1) | 402 (52.1) | 332 (51.9) | 70 (53.4) |  |
|  Slight/moderate disability (2-3)  | 330 (42.8) | 279 (43.6) | 51 (38.9) |  |
|  Moderately severe/severe disability (4-5) | 39 (5.1) | 29 (4.5) | 10 (7.6) |  |
| Number of medical conditions  | 2.4 ± 1.5 | 2.5 ± 1.5 | 2.3 ± 1.4 | 0.252 |
| Cardiovascular risk factors |  |  |  |  |
|  Coronary artery disease  | 192 (24.4) | 166 (25.5) | 26 (19.4) | 0.137 |
|  Atrial fibrillation  | 86 (10.9) | 77 (11.8) | 9 (6.7) | 0.085 |
|  Congestive heart failure  | 42 (5.3) | 34 (5.2) | 8 (6.0) | 0.723 |
|  Hypertension  | 618 (78.6) | 512 (78.5) | 106 (79.1) | 0.882 |
|  Diabetes  | 359 (45.7) | 299 (45.9) | 60 (44.8) | 0.819 |
|  High cholesterol  | 381 (48.5) | 323 (49.5) | 58 (43.3) | 0.187 |
| Health risk behaviors |  |  |  |  |
|  Current smokinga  | 194 (26.5) | 155 (25.3) | 39 (32.2) | 0.116 |
|  Excessive alcohol use  | 59 (7.5) | 46 (7.1) | 13 (9.7) | 0.290 |
|  Obesity (body mass index≥30)a  | 333 (42.5) | 275 (42.3) | 58 (43.6) | 0.782 |
| Depressive symptoms at 90 days post-stroke (PHQ-8)  | 7.0 ± 6.6 | 6.8 ± 6.6 | 7.7 ± 6.7 | 0.118 |

Abbreviations: PHQ-8 = 8-item Patient Health Questionnaire; mRS = modified Rankin Scale; NIHSS = NIH Stroke Scale; SD = standard deviation.

Values are mean ± SD or n (%).

aVariables with missing data. The numbers of missing values were 53 for current smoking, 15 for pre-stroke disability, 10 for pre-stroke depression status, 3 for stroke severity, 3 for obesity, 1 for stroke type, 1 for education, and 1 for marital status.

Table S5. Sample characteristics by sex among 511 participants with no history of depression before stroke, Brain Attack Surveillance in Corpus Christi project, United States, 2011-2016

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Total (n=511)  | Men(n= 299) | Women (n=212) | *p* Value |
| **Sociodemographic characteristics** |  |  |  |  |
| Age  | 66.1 ± 11.4 | 64.3 ± 10.3 | 68.6 ± 12.4 | <0.001 |
| Age  |  |  |  | 0.001 |
|  <65 | 245 (48.0) | 161 (53.9) | 84 (39.6) |  |
|  65-79 | 189 (37.0) | 106 (35.5) | 83 (39.2) |  |
|  ≥80 | 77 (15.1) | 32 (10.7) | 45 (21.2) |  |
| Race/ethnicity  |  |  |  | 0.778 |
|  Non-Hispanic white | 187 (36.6) | 113 (37.8) | 74 (34.9) |  |
|  Mexican American  | 292 (57.1) | 167 (55.9) | 125 (59.0) |  |
|  Other | 32 (6.3) | 19 (6.4) | 13 (6.1) |  |
| Education  |  |  |  | 0.117 |
|  Less than high school | 138 (27.0) | 73 (24.4) | 65 (30.7) |  |
|  High school and above | 373 (73.0) | 226 (75.6) | 147 (69.3) |  |
| Marital status  |  |  |  | <0.001 |
|  Married/partnered | 264 (51.7) | 183 (61.2) | 81 (38.2) |  |
|  Single  | 40 (7.8) | 23 (7.7) | 17 (8.0) |  |
|  Widowed | 97 (19.0) | 24 (8.0) | 73 (34.4) |  |
|  Separated/divorced | 110 (21.5) | 69 (23.1) | 41 (19.3) |  |
| Health insurance status  |  |  |  | 0.313 |
|  Insured | 444 (86.9) | 256 (85.6) | 188 (88.7) |  |
|  Uninsured  | 67 (13.1) | 43 (14.4) | 24 (11.3) |  |
| **Stroke characteristics** |  |  |  |  |
| Stroke type  |  |  |  | 0.920 |
|  Ischemic stroke | 462 (90.4) | 270 (90.3) | 192 (90.6) |  |
|  Intracerebral hemorrhage stroke | 49 (9.6) | 29 (9.7) | 20 (9.4) |  |
| Stroke severity (NIHSS)a  | 4.0 ± 4.8 | 3.6 ± 4.1 | 4.6 ± 5.6 | 0.023 |
| **Pre-stroke characteristics** |  |  |  |  |
| Disability (mRS)a |  |  |  | 0.292 |
|  No disability (0-1) | 302 (59.7) | 184 (62.6) | 118 (55.7) |  |
|  Slight/moderate disability (2-3)  | 187 (37.0) | 101 (34.4) | 86 (40.6) |  |
|  Moderately severe/severe disability (4-5) | 17 (3.4) | 9 (3.1) | 8 (3.8) |  |
| Cognitive function (IQCODE)a  | 3.1 ± 0.3 | 3.1 ± 0.3 | 3.1 ± 0.2 | 0.557 |
| Number of medical conditions  | 2.3 ± 1.6 | 2.4 ± 1.5 | 2.2 ± 1.7 | 0.019 |
| Cardiovascular risk factors |  |  |  |  |
|  Coronary artery disease  | 116 (22.7) | 84 (28.1) | 32 (15.1) | 0.001 |
|  Atrial fibrillation  | 65 (12.7) | 35 (11.7) | 30 (14.2) | 0.414 |
|  Congestive heart failure  | 24 (4.7) | 14 (4.7) | 10 (4.7) | 0.985 |
|  Hypertension  | 385 (75.3) | 229 (76.6) | 156 (73.6) | 0.438 |
|  Diabetes  | 221 (43.3) | 139 (46.5) | 82 (38.7) | 0.079 |
|  High cholesterol  | 225 (44.0) | 142 (47.5) | 83 (39.2) | 0.061 |
| Health risk behaviors |  |  |  |  |
|  Current smokinga  | 104 (21.9) | 79 (29.2) | 25 (12.3) | <0.001 |
|  Excessive alcohol use  | 42 (8.2) | 32 (10.7) | 10 (4.7) | 0.015 |
|  Obesity (body mass index≥30)a  | 203 (39.9) | 116 (38.9) | 87 (41.2) | 0.601 |

Abbreviations: IQCODE = Informant Questionnaire on Cognitive Decline in the Elderly; mRS = modified Rankin Scale; NIHSS = NIH Stroke Scale; SD = standard deviation.

Values are mean ± SD or n (%).

aVariables with missing data. The numbers of missing values were 79 for pre-stroke cognitive function, 37 for current smoking, 5 for pre-stroke disability, 3 for stroke severity, and 2 for obesity.

Table S6. Results from weighted logistic regression models of the association between sex and depression after stroke among 511 participants with no history of depression before stroke, Brain Attack Surveillance in Corpus Christi project, United States, 2011-2016

|  |  |  |
| --- | --- | --- |
|  | Model S1 OR (95% CI) | Model S2 OR (95% CI) |
| Sex  |  |  |
|  Men | Reference | Reference |
|  Women  | 0.95 (0.60, 1.51) | 0.95 (0.54, 1.66) |
| Age  |  |  |
|  <65 | Reference | Reference |
|  65-79 | 0.52 (0.31, 0.87) | 0.57 (0.30, 1.09) |
|  ≥80 | 0.71 (0.36, 1.41) | 0.75 (0.30, 1.88) |
| Race/ethnicity |  |  |
|  Non-Hispanic white |  | Reference |
|  Mexican American |  | 1.01 (0.54, 1.89) |
|  Other |  | 1.41 (0.30, 6.53) |
| Education |  |  |
|  Less than high school |  | 1.54 (0.83, 2.84) |
|  High school and above |  | Reference |
| Marital status |  |  |
|  Married/partnered |  | Reference |
|  Single |  | 1.05 (0.35, 3.12) |
|  Widowed |  | 1.78 (0.84, 3.75) |
|  Separated/divorced |  | 0.98 (0.51, 1.87) |
| Health insurance status |  |  |
|  Insured |  | Reference |
|  Uninsured |  | 2.35 (1.16, 4.78) |
| Stroke type |  |  |
|  Ischemic stroke |  | Reference |
|  Intracerebral hemorrhage stroke |  | 1.29 (0.60, 2.77) |
| Stroke severity (NIHSS) |  | 1.00 (0.95, 1.05) |
| Pre-stroke disability (mRS) |  |  |
|  No disability |  | Reference |
|  Slight/moderate disability |  | 1.33 (0.76, 2.30) |
|  Moderately severe/severe disability  |  | 2.41 (0.06, 89.99) |
| Pre-stroke cognitive function (IQCODE) |  |  |
|  Normal  |  | Reference |
|  CIND  |  | 0.79 (0.39, 1.57) |
|  Dementia |  | 0.58 (0.03, 11.59) |
| Number of medical conditions |  | 1.31 (1.06, 1.60) |
| Coronary heart disease |  |  |
|  No |  | Reference |
|  Yes |  | 0.61 (0.29, 1.29) |
| Current smoking |  |  |
|  No |  | Reference |
|  Yes |  | 2.36 (1.28, 4.36) |
| Excessive alcohol use |  |  |
|  No |  | Reference |
|  Yes |  | 0.96 (0.40, 2.33) |
| Obesity |  |  |
|  No |  | Reference |
|  Yes |  | 1.32 (0.78, 2.22) |

Abbreviations: CI = confidence interval; CIND = cognitive impairment no dementia; IQCODE = Informant Questionnaire on Cognitive Decline in the Elderly; mRS = modified Rankin Scale; NIHSS = NIH Stroke Scale.

The sample size of all three models was 511.

Table S7. Comparison of missing data methods for stratum-specific odds ratios of depression at 90 days post-stroke comparing women with men by pre-stroke depression status, Brain Attack Surveillance in Corpus Christi project, United States, 2011-2016

|  |  |  |  |
| --- | --- | --- | --- |
|  | Main analysis (n=786)OR (95% CI) | With imputation only (n=786)OR (95% CI) | Complete case analysis (n=590)OR (95% CI) |
| No history of depression | 1.11 (0.66, 1.86) | 1.18 (0.72, 1.92) | 1.55 (0.88, 2.74) |
| History of depression  | 1.92 (0.80, 4.61) | 1.80 (0.79, 4.08) | 1.68 (0.64, 4.43) |
| On medication for depression at the time of stroke | 0.39 (0.16, 0.96) | 0.45 (0.20, 1.02) | 0.44 (0.17, 1.16) |

Abbreviations: CI = confidence interval; OR = odds ratio.

The model included the interaction between sex and pre-stroke depression status, and covariates of Model 3.

Table S8. Results from the sensitivity analysis of multiple imputation for missing covariate data on baseline cognitive function, Brain Attack Surveillance in Corpus Christi project, United States, 2011-2016

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scale | Model 1OR (95% CI) | Model 2OR (95% CI) | Model 3OR (95% CI) | Model with interaction (*p* Value for interaction test) |
| 0.6 | 1.35 (0.98, 1.86) | 0.97 (0.68, 1.37) | 1.00 (0.67, 1.50) | 0.037 |
| 0.8 | 1.35 (0.98, 1.86) | 0.97 (0.68, 1.37) | 1.00 (0.67, 1.50) | 0.037 |
| 1.0 | 1.34 (0.97, 1.85) | 0.96 (0.68, 1.36) | 1.00 (0.67, 1.49) | 0.038 |
| 1.2 | 1.32 (0.96,1.82) | 0.95 (0.67,1.35) | 0.99 (0.66,1.48) | 0.038 |
| 1.4 | 1.32 (0.96,1.82) | 0.94 (0.67,1.34) | 0.98 (0.65,1.47) | 0.038 |

Abbreviations: CI = confidence interval; OR = odds ratio.

Participants with missing cognitive data on baseline cognitive function were assumed to have 0.6, 0.8, 1.0, 1.2 or 1.4 times of the observed cognitive level after adjusting for other covariates, with 1.0 indicating missing at random. Model 1 adjusted for age; Model 2 additionally adjusted for pre-stroke depression status; and Model 3 adjusted for Model 2 covariates and socio-demographics (race/ethnicity, education, marital status, health insurance status), stroke (stroke type, stroke severity), and pre-stroke characteristics (functional disability, cognitive impairment, health risk behaviors).