STaTa®
Statistics/Data Analysis

```
------------------------------------------------------------------------------
       name:  <unnamed>
        log:  E:\nhats\nhats_code\NHATS data setup\logs\/3_nhats_cleaning_18_Apr_
  > 2019.smcl
   log type:  text
  opened on:  18 Apr 2019, 13:08:06

1 .
2 .
3 .
4 . cd "${work}"
  E:\nhats\data\NHATS working data

5 .
6 . **********************************************
7 .
8 . use round_1_${w}_cleanv1.dta, clear

9 .
10. **********************************************
11. tab wave, missing

  Survey wave |      Freq.     Percent        Cum.
  ------------+-----------------------------------
            1 |      8,245       17.26       17.26
            2 |      7,075       14.81       32.06
            3 |      5,799       12.14       44.20
            4 |      4,737        9.91       54.12
            5 |      8,334       17.44       71.56
            6 |      7,276       15.23       86.79
            7 |      6,312       13.21      100.00
  ------------+-----------------------------------
        Total |     47,778      100.00

12.
13. **********************************************
14. **********************************************
15. //self reported health status/conditions
16. **********************************************
17. **********************************************
18. gen srh=.
  (47,778 missing values generated)

19. forvalues w=1/$w{
    2. tab health if wave==`w', missing
    3. replace srh=health if wave==`w'
    4. }

  R1 HC1 OVERALL |
         HEALTH |
      CONDITION |      Freq.     Percent        Cum.
  --------------+-----------------------------------
     -9 Missing |        168        2.04        2.04
          -8 DK |          6        0.07        2.11
 -1 Inapplicable |       468        5.68        7.79
    1 EXCELLENT |        938       11.38       19.16
   2 VERY GOOD |      2,029       24.61       43.77
        3 GOOD |      2,426       29.42       73.20
        4 FAIR |      1,607       19.49       92.69
        5 POOR |        603        7.31      100.00
  --------------+-----------------------------------
        Total |      8,245      100.00
  (8,245 real changes made)
```

```
R1 HC1 OVERALL |
       HEALTH |
     CONDITION |      Freq.      Percent       Cum.
---------------+---------------------------------
    -9 Missing |        190         2.69        2.69
        -8 DK  |          6         0.08        2.77
-1 Inapplicable|        829        11.72       14.49
   1 EXCELLENT |        698         9.87       24.35
  2 VERY GOOD  |      1,709        24.16       48.51
       3 GOOD  |      2,000        28.27       76.78
       4 FAIR  |      1,220        17.24       94.02
       5 POOR  |        423         5.98      100.00
---------------+---------------------------------
        Total  |      7,075       100.00
(7,075 real changes made)

R1 HC1 OVERALL |
       HEALTH |
     CONDITION |      Freq.      Percent       Cum.
---------------+---------------------------------
    -9 Missing |        179         3.09        3.09
        -8 DK  |          2         0.03        3.12
-1 Inapplicable|        736        12.69       15.81
   1 EXCELLENT |        522         9.00       24.81
  2 VERY GOOD  |      1,411        24.33       49.15
       3 GOOD  |      1,658        28.59       77.74
       4 FAIR  |        985        16.99       94.72
       5 POOR  |        306         5.28      100.00
---------------+---------------------------------
        Total  |      5,799       100.00
(5,799 real changes made)

R1 HC1 OVERALL |
       HEALTH |
     CONDITION |      Freq.      Percent       Cum.
---------------+---------------------------------
    -9 Missing |        156         3.29        3.29
        -8 DK  |          3         0.06        3.36
        -7 RF  |          1         0.02        3.38
-1 Inapplicable|        544        11.48       14.86
   1 EXCELLENT |        406         8.57       23.43
  2 VERY GOOD  |      1,225        25.86       49.29
       3 GOOD  |      1,379        29.11       78.40
       4 FAIR  |        773        16.32       94.72
       5 POOR  |        250         5.28      100.00
---------------+---------------------------------
        Total  |      4,737       100.00
(4,737 real changes made)

R1 HC1 OVERALL |
       HEALTH |
     CONDITION |      Freq.      Percent       Cum.
---------------+---------------------------------
    -9 Missing |        179         2.15        2.15
        -8 DK  |          8         0.10        2.24
-1 Inapplicable|        579         6.95        9.19
   1 EXCELLENT |        855        10.26       19.45
  2 VERY GOOD  |      2,116        25.39       44.84
       3 GOOD  |      2,593        31.11       75.95
       4 FAIR  |      1,550        18.60       94.55
       5 POOR  |        454         5.45      100.00
---------------+---------------------------------
        Total  |      8,334       100.00
(8,334 real changes made)
```

```
   R1 HC1 OVERALL |
        HEALTH |
      CONDITION |       Freq.       Percent        Cum.
---------------+---------------------------------
      -9 Missing |         177         2.43         2.43
           -8 DK |           3         0.04         2.47
           -7 RF |           1         0.01         2.49
  -1 Inapplicable |         689         9.47        11.96
     1 EXCELLENT |         688         9.46        21.41
    2 VERY GOOD |       1,867        25.66        47.07
         3 GOOD |       2,225        30.58        77.65
         4 FAIR |       1,275        17.52        95.18
         5 POOR |         351         4.82       100.00
---------------+---------------------------------
          Total |       7,276       100.00
(7,276 real changes made)

   R1 HC1 OVERALL |
        HEALTH |
      CONDITION |       Freq.       Percent        Cum.
---------------+---------------------------------
      -9 Missing |         158         2.50         2.50
           -8 DK |           3         0.05         2.55
  -1 Inapplicable |         588         9.32        11.87
     1 EXCELLENT |         550         8.71        20.58
    2 VERY GOOD |       1,636        25.92        46.50
         3 GOOD |       2,013        31.89        78.39
         4 FAIR |       1,040        16.48        94.87
         5 POOR |         324         5.13       100.00
---------------+---------------------------------
          Total |       6,312       100.00
(6,312 real changes made)
```

20. replace srh=. if inlist(srh,-9,-1)
  (5,640 real changes made, 5,640 to missing)

21.
22. la var srh "Self reported health, categorical"

23. la def srh 1 "Excellent" 2 "Very good" 3 "Good" 4 "Fair" 5 "Poor"

24. la val srh srh

25. tab srh if ivw_type==1, missing

```
        Self |
    reported |
     health, |
  categorical |       Freq.       Percent        Cum.
-----------+---------------------------------
          -8 |          31         0.07         0.07
          -7 |           2         0.00         0.08
   Excellent |       4,657        11.05        11.13
  Very good |      11,993        28.46        39.59
        Good |      14,294        33.92        73.51
        Fair |       8,450        20.05        93.57
        Poor |       2,711         6.43       100.00
-----------+---------------------------------
       Total |      42,138       100.00
```

```
26.
27. gen srh_fp=1 if srh==4 | srh==5
   (36,617 missing values generated)

28. replace srh_fp=0 if inlist(srh,1,2,3)
   (30,944 real changes made)

29. replace srh_fp=-7 if srh == -7
   (2 real changes made)

30. replace srh_fp=-8 if srh == -8
   (31 real changes made)

31. la var srh_fp "Self reported health=fair/poor"

32. tab srh_fp srh, missing
```

Self reported health=fair/poor	-8	-7	Excellent	Very good	Good	Total
-8	31	0	0	0	0	31
-7	0	2	0	0	0	2
0	0	0	4,657	11,993	14,294	30,944
1	0	0	0	0	0	11,161
.	0	0	0	0	0	5,640
Total	31	2	4,657	11,993	14,294	47,778

Self reported health=fair/poor	Fair	Poor	.	Total
-8	0	0	0	31
-7	0	0	0	2
0	0	0	0	30,944
1	8,450	2,711	0	11,161
.	0	0	5,640	5,640
Total	8,450	2,711	5,640	47,778

```
33.
34. *********************************************
35. //Self-Report Disease
36. *********************************************
37. //Round 1 - ever told you had xx
38. //Round 2 - since the last interview, new condition?
39. /*
 > 1 heart attack
 > 2 heart disease
 > 3 high blood pressure
 > 4 arthritis
 > 5 osteoporosis
 > 6 diabetes
 > 7 lung disease
 > 8 stroke
 > 9 dementia
 > 10 cancer
 > create two sets of indicator variables for waves 2 and later
 > sr_disease_ever = 1 if ever report having the disease (only this variable in w
 > ave 1)
 > sr_disease_new = 1 if newly reported the disease this wave
 > */
```

```
40.
41. //heart attack / ami, asked both waves, for Wave 1 ask ever had, wave 2 ask in
  >  last year
42. //same questions for stroke, cancer
43.
44. capture program drop disease

45. program define disease
  1.          args dis num
  2.
46.         gen sr_`dis'_raw=.
  3.           forvalues w=1/$w{
  4.                   replace sr_`dis'_raw=1 if disescn`num'==1 & wave==`w'
  5.                   replace sr_`dis'_raw=0 if disescn`num'==2 & wave==`w'
  6.                   replace sr_`dis'_raw=-7 if disescn`num'==-7 & wave==`w'
  7.                   replace sr_`dis'_raw=-8 if disescn`num'==-8 & wave==`w'
  8.           }
  9.           //create two new variables from this...
47.         gen sr_`dis'_ever=sr_`dis'_raw
  10.          replace sr_`dis'_ever=. if inrange(wave, 2, $w) & sr_`dis'_raw==0 /
  > /set to missing if report no new wave
  11.          replace sr_`dis'_ever=-7 if sr_`dis'_raw == -7
  12.          replace sr_`dis'_ever=-8 if sr_`dis'_raw == -8
  13.
48.         sort spid wave
  14.          by spid (wave): carryforward sr_`dis'_ever if ivw_type==1 , replace
  15.
49.         replace sr_`dis'_ever = sr_`dis'_raw if inrange(wave,2,$w) & sr_`dis'_
  > ever == . & sr_`dis'_raw != .
  16.
50.         gen sr_`dis'_new=sr_`dis'_raw if inrange(wave,2,$w)
  17.
51.         end

52.
53. //now run programs for specific disease variables
54. disease ami 1
  (47,778 missing values generated)
  (1,164 real changes made)
  (6,437 real changes made)
  (0 real changes made)
  (8 real changes made)
  (178 real changes made)
  (5,875 real changes made)
  (0 real changes made)
  (3 real changes made)
  (141 real changes made)
  (4,735 real changes made)
  (1 real change made)
  (7 real changes made)
  (114 real changes made)
  (3,917 real changes made)
  (0 real changes made)
  (6 real changes made)
  (622 real changes made)
  (6,936 real changes made)
  (0 real changes made)
  (18 real changes made)
  (160 real changes made)
  (6,243 real changes made)
  (0 real changes made)
  (7 real changes made)
  (150 real changes made)
  (5,407 real changes made)
  (0 real changes made)
  (9 real changes made)
  (5,640 missing values generated)
  (33,113 real changes made, 33,113 to missing)
  (0 real changes made)
  (0 real changes made)
  sr_ami_ever:  (24599 real changes made)
  (8,514 real changes made)
```

  (13,249 missing values generated)

55. disease stroke 8
  (47,778 missing values generated)
  (892 real changes made)
  (6,709 real changes made)
  (0 real changes made)
  (8 real changes made)
  (178 real changes made)
  (5,871 real changes made)
  (0 real changes made)
  (7 real changes made)
  (151 real changes made)
  (4,727 real changes made)
  (1 real change made)
  (5 real changes made)
  (133 real changes made)
  (3,897 real changes made)
  (0 real changes made)
  (7 real changes made)
  (476 real changes made)
  (7,083 real changes made)
  (0 real changes made)
  (17 real changes made)
  (165 real changes made)
  (6,233 real changes made)
  (0 real changes made)
  (12 real changes made)
  (158 real changes made)
  (5,404 real changes made)
  (0 real changes made)
  (4 real changes made)
  (5,640 missing values generated)
  (33,215 real changes made, 33,215 to missing)
  (0 real changes made)
  (0 real changes made)
   sr_stroke_ever: (24243 real changes made)
  (8,972 real changes made)
  (13,249 missing values generated)

56. disease cancer 10
  (47,778 missing values generated)
  (1,953 real changes made)
  (5,653 real changes made)
  (1 real change made)
  (2 real changes made)
  (355 real changes made)
  (5,694 real changes made)
  (0 real changes made)
  (7 real changes made)
  (275 real changes made)
  (4,602 real changes made)
  (1 real change made)
  (6 real changes made)
  (240 real changes made)
  (3,792 real changes made)
  (0 real changes made)
  (5 real changes made)
  (1,183 real changes made)
  (6,386 real changes made)
  (1 real change made)
  (6 real changes made)
  (375 real changes made)
  (6,031 real changes made)
  (0 real changes made)
  (4 real changes made)
  (369 real changes made)
  (5,190 real changes made)
  (0 real changes made)
  (7 real changes made)
  (5,640 missing values generated)
  (31,695 real changes made, 31,695 to missing)

```
  (0 real changes made)
  (0 real changes made)
 sr_cancer_ever:  (24273 real changes made)
  (7,422 real changes made)
  (13,249 missing values generated)
57.
58. la var sr_ami_raw "Self report Heart Attack, Raw"

59. la var sr_ami_ever "Ever Self report Heart Attack"

60. la var sr_ami_new "Self report Heart Attack since prev year"

61. la var sr_stroke_raw "Self report Stroke, Raw"

62. la var sr_stroke_ever "Ever Self report Stroke"

63. la var sr_stroke_new "Self report Stroke since prev year"

64. la var sr_cancer_raw "Self report Cancer, Raw"

65. la var sr_cancer_ever "Ever Self report Cancer"

66. la var sr_cancer_new "Self report Cancer since prev year"

67.
68. notes sr_ami_raw: disescn1

69. notes sr_ami_raw: Had a heart attack or myocardial infarction (self-report).

70. notes sr_stroke_raw: disescn8

71. notes sr_stroke_raw: Had a stroke (self-report).

72. notes sr_cancer_raw: disescn10

73. notes sr_cancer_raw: Had cancer (self-report).

74.
75. notes sr_ami_ever: sr_ami_raw

76. notes sr_ami_ever: If ever had a heart attack or myocardial infarction (self-r
  > eport).

77. notes sr_stroke_ever: sr_stroke_raw

78. notes sr_stroke_ever: If ever had a stroke (self-report).

79. notes sr_cancer_ever: sr_cancer_raw

80. notes sr_cancer_ever: If ever had cancer (self-report).

81.
82. notes sr_ami_new: sr_ami_raw

83. notes sr_ami_new: If heart attack or myocardial infarction within last year (s
  > elf-report).

84. notes sr_stroke_new: sr_stroke_raw
```

```
85. notes sr_stroke_new: If stroke within last year (self-report).

86. notes sr_cancer_new: sr_cancer_raw

87. notes sr_cancer_new: If cancer found within last year (self-report).

88.
89. //same question pattern, different variable name though, for hip fracture
90. gen sr_hip_raw=.
   (47,778 missing values generated)

91. forvalues w=1/$w{
     2.          replace sr_hip_raw=1 if brokebon1==1 & wave==`w'
     3.          replace sr_hip_raw=0 if brokebon1==2 & wave==`w'
     4.          replace sr_hip_raw = -7 if brokebon1==-7 & wave==`w'
     5.          replace sr_hip_raw = -8 if brokebon1==-8 & wave==`w'
     6. }
   (379 real changes made)
   (7,226 real changes made)
   (0 real changes made)
   (4 real changes made)
   (78 real changes made)
   (5,976 real changes made)
   (0 real changes made)
   (2 real changes made)
   (86 real changes made)
   (4,795 real changes made)
   (1 real change made)
   (2 real changes made)
   (57 real changes made)
   (3,979 real changes made)
   (0 real changes made)
   (1 real change made)
   (223 real changes made)
   (7,350 real changes made)
   (0 real changes made)
   (3 real changes made)
   (87 real changes made)
   (6,320 real changes made)
   (0 real changes made)
   (3 real changes made)
   (67 real changes made)
   (5,499 real changes made)
   (0 real changes made)
   (0 real changes made)

92. //create two new variables from this...
93. gen sr_hip_ever=sr_hip_raw
   (5,640 missing values generated)

94. replace sr_hip_ever=. if (inrange(wave,2,$w)) & sr_hip_raw==0 //set to missing
   >  if report no new wave
   (33,919 real changes made, 33,919 to missing)

95.
96. sort spid wave

97. by spid (wave): carryforward sr_hip_ever if ivw_type==1 , replace
   sr_hip_ever:   (24362 real changes made)
```

```
98.
99. replace sr_hip_ever = sr_hip_raw if inrange(wave,2,$w) & sr_hip_ever == . & sr
  > _hip_raw != .
  (9,557 real changes made)

100
101 gen sr_hip_new=sr_hip_raw if inrange(wave,2,$w)
  (13,249 missing values generated)

102 la var sr_hip_raw "Self report Hip Fracture, Raw"

103 la var sr_hip_ever "Ever Self report Hip Fracture (since age 50)"

104 la var sr_hip_new "Self report Hip Fracture since prev year"

105
106 notes sr_hip_raw: brokebon1

107 notes sr_hip_raw: Had broken or fractured hip (self-report).

108 notes sr_hip_ever: sr_hip_raw

109 notes sr_hip_ever: Had ever broken or fractured hip (self-report).

110 notes sr_hip_new: sr_hip_raw

111 notes sr_hip_new: Had hip fracture since prev interview (self-report).

112
113 foreach x in sr_ami_raw sr_stroke_raw sr_cancer_raw sr_ami_ever sr_stroke_ever
  >  ///
  > sr_ami_new sr_stroke_new sr_cancer_new sr_cancer_ever sr_hip_raw sr_hip_ever s
  > r_hip_new{
    2. notes `x': Located in NHATS Setup, under Part 4.
    3. notes `x': Updated: 04/15/19-MH
    4. }

114
115 foreach dis in ami stroke cancer hip{
    2. tab sr_`dis'_raw wave if ivw_type==1, missing
    3. tab sr_`dis'_ever wave if ivw_type==1, missing
    4. tab sr_`dis'_new wave if ivw_type==1, missing
    5. }
```

Self report Heart Attack, Raw	1	2	Survey wave 3	4	5	Total
-8	8	3	7	6	18	58
-7	0	0	1	0	0	1
0	6,437	5,875	4,735	3,917	6,936	39,550
1	1,164	178	141	114	622	2,529
Total	7,609	6,056	4,884	4,037	7,576	42,138

Self report Heart Attack, Raw	Survey wave 6	7	Total
-8	7	9	58
-7	0	0	1
0	6,243	5,407	39,550
1	160	150	2,529
Total	6,410	5,566	42,138

Ever Self report Heart Attack	Survey wave 1	2	3	4	5	Total
-8	8	8	12	10	27	120
-7	0	0	1	1	1	3
0	6,437	5,040	4,025	3,289	6,343	35,023
1	1,164	1,008	846	737	1,205	6,992
Total	7,609	6,056	4,884	4,037	7,576	42,138

Ever Self report Heart Attack	Survey wave 6	7	Total
-8	27	28	120
-7	0	0	3
0	5,311	4,578	35,023
1	1,072	960	6,992
Total	6,410	5,566	42,138

Self report Heart Attack since prev year	Survey wave 1	2	3	4	5	Total
-8	0	3	7	6	18	50
-7	0	0	1	0	0	1
0	0	5,875	4,735	3,917	6,936	33,113
1	0	178	141	114	622	1,365
.	7,609	0	0	0	0	7,609
Total	7,609	6,056	4,884	4,037	7,576	42,138

Self report Heart Attack since prev year	Survey wave 6	7	Total
-8	7	9	50
-7	0	0	1
0	6,243	5,407	33,113
1	160	150	1,365
.	0	0	7,609
Total	6,410	5,566	42,138

Self report Stroke, Raw	Survey wave 1	2	3	4	5	Total
-8	8	7	5	7	17	60
-7	0	0	1	0	0	1
0	6,709	5,871	4,727	3,897	7,083	39,924
1	892	178	151	133	476	2,153
Total	7,609	6,056	4,884	4,037	7,576	42,138

```
  Self |
report |
Stroke, |       Survey wave
   Raw |        6          7 |      Total
-----------+----------------------+----------
    -8 |        12          4 |         60
    -7 |         0          0 |          1
     0 |     6,233      5,404 |     39,924
     1 |       165        158 |      2,153
-----------+----------------------+----------
 Total |     6,410      5,566 |     42,138
```

```
Ever Self |
  report |                      Survey wave
  Stroke |        1          2          3          4          5 |      Total
-----------+-------------------------------------------------------+----------
    -8 |         8         13         12         14         24 |        122
    -7 |         0          0          1          1          1 |          3
     0 |     6,709      5,262      4,186      3,423      6,633 |     36,555
     1 |       892        781        685        599        918 |      5,458
-----------+-------------------------------------------------------+----------
 Total |     7,609      6,056      4,884      4,037      7,576 |     42,138
```

```
Ever Self |
  report |       Survey wave
  Stroke |        6          7 |      Total
-----------+----------------------+----------
    -8 |        27         24 |        122
    -7 |         0          0 |          3
     0 |     5,554      4,788 |     36,555
     1 |       829        754 |      5,458
-----------+----------------------+----------
 Total |     6,410      5,566 |     42,138
```

```
   Self |
 report |
 Stroke |
since prev |                      Survey wave
   year |        1          2          3          4          5 |      Total
-----------+-------------------------------------------------------+----------
    -8 |         0          7          5          7         17 |         52
    -7 |         0          0          1          0          0 |          1
     0 |         0      5,871      4,727      3,897      7,083 |     33,215
     1 |         0        178        151        133        476 |      1,261
     . |     7,609          0          0          0          0 |      7,609
-----------+-------------------------------------------------------+----------
 Total |     7,609      6,056      4,884      4,037      7,576 |     42,138
```

```
   Self |
 report |
 Stroke |
since prev |       Survey wave
   year |        6          7 |      Total
-----------+----------------------+----------
    -8 |        12          4 |         52
    -7 |         0          0 |          1
     0 |     6,233      5,404 |     33,215
     1 |       165        158 |      1,261
     . |         0          0 |      7,609
-----------+----------------------+----------
 Total |     6,410      5,566 |     42,138
```

```
      Self |
    report |
   Cancer, |                        Survey wave
       Raw |      1         2         3         4         5 |      Total
-----------+-------------------------------------------------+----------
        -8 |      2         7         6         5         6 |         37
        -7 |      1         0         1         0         1 |          3
         0 |  5,653     5,694     4,602     3,792     6,386 |     37,348
         1 |  1,953       355       275       240     1,183 |      4,750
-----------+-------------------------------------------------+----------
     Total |  7,609     6,056     4,884     4,037     7,576 |     42,138
```

```
      Self |
    report |
   Cancer, |     Survey wave
       Raw |      6         7 |      Total
-----------+--------------------+----------
        -8 |      4         7 |         37
        -7 |      0         0 |          3
         0 |  6,031     5,190 |     37,348
         1 |    375       369 |      4,750
-----------+--------------------+----------
     Total |  6,410     5,566 |     42,138
```

```
 Ever Self |
    report |                        Survey wave
    Cancer |      1         2         3         4         5 |      Total
-----------+-------------------------------------------------+----------
        -8 |      2         8        11        13        16 |         85
        -7 |      1         1         2         2         2 |         10
         0 |  5,653     4,357     3,430     2,746     5,407 |     29,831
         1 |  1,953     1,690     1,441     1,276     2,151 |     12,212
-----------+-------------------------------------------------+----------
     Total |  7,609     6,056     4,884     4,037     7,576 |     42,138
```

```
 Ever Self |
    report |     Survey wave
    Cancer |      6         7 |      Total
-----------+--------------------+----------
        -8 |     17        18 |         85
        -7 |      1         1 |         10
         0 |  4,478     3,760 |     29,831
         1 |  1,914     1,787 |     12,212
-----------+--------------------+----------
     Total |  6,410     5,566 |     42,138
```

```
      Self |
    report |
    Cancer |
since prev |                        Survey wave
      year |      1         2         3         4         5 |      Total
-----------+-------------------------------------------------+----------
        -8 |      0         7         6         5         6 |         35
        -7 |      0         0         1         0         1 |          2
         0 |      0     5,694     4,602     3,792     6,386 |     31,695
         1 |      0       355       275       240     1,183 |      2,797
         . |  7,609         0         0         0         0 |      7,609
-----------+-------------------------------------------------+----------
     Total |  7,609     6,056     4,884     4,037     7,576 |     42,138
```

```
     Self |
   report |
   Cancer |
since prev |       Survey wave
     year |      6          7 |      Total
----------+--------------------+----------
       -8 |      4          7 |         35
       -7 |      0          0 |          2
        0 |  6,031      5,190 |     31,695
        1 |    375        369 |      2,797
        . |      0          0 |      7,609
----------+--------------------+----------
    Total |  6,410      5,566 |     42,138
```

```
     Self |
report Hip |
Fracture, |                      Survey wave
      Raw |      1          2          3          4          5 |      Total
----------+-------------------------------------------------------+----------
       -8 |      4          2          2          1          3 |         15
       -7 |      0          0          1          0          0 |          1
        0 |  7,226      5,976      4,795      3,979      7,350 |     41,145
        1 |    379         78         86         57        223 |        977
----------+-------------------------------------------------------+----------
    Total |  7,609      6,056      4,884      4,037      7,576 |     42,138
```

```
     Self |
report Hip |
Fracture, |       Survey wave
      Raw |      6          7 |      Total
----------+--------------------+----------
       -8 |      3          0 |         15
       -7 |      0          0 |          1
        0 |  6,320      5,499 |     41,145
        1 |     87         67 |        977
----------+--------------------+----------
    Total |  6,410      5,566 |     42,138
```

```
Ever Self |
report Hip |
 Fracture |
(since age |                      Survey wave
      50) |      1          2          3          4          5 |      Total
----------+-------------------------------------------------------+----------
       -8 |      4          5          6          3          6 |         34
       -7 |      0          0          1          1          1 |          3
        0 |  7,226      5,706      4,556      3,751      7,134 |     39,564
        1 |    379        345        321        282        435 |      2,537
----------+-------------------------------------------------------+----------
    Total |  7,609      6,056      4,884      4,037      7,576 |     42,138
```

```
Ever Self |
report Hip |
 Fracture |
(since age |       Survey wave
      50) |      6          7 |      Total
----------+--------------------+----------
       -8 |      7          3 |         34
       -7 |      0          0 |          3
        0 |  5,993      5,198 |     39,564
        1 |    410        365 |      2,537
----------+--------------------+----------
    Total |  6,410      5,566 |     42,138
```

```
      Self |
report Hip |
 Fracture |
since prev |                        Survey wave
     year |         1         2         3         4         5 |      Total
-----------+-------------------------------------------------------+----------
       -8 |         0         2         2         1         3 |         11
       -7 |         0         0         1         0         0 |          1
        0 |         0     5,976     4,795     3,979     7,350 |     33,919
        1 |         0        78        86        57       223 |        598
        . |     7,609         0         0         0         0 |      7,609
-----------+-------------------------------------------------------+----------
    Total |     7,609     6,056     4,884     4,037     7,576 |     42,138


      Self |
report Hip |
 Fracture |
since prev |     Survey wave
     year |         6         7 |      Total
-----------+----------------------+----------
       -8 |         3         0 |         11
       -7 |         0         0 |          1
        0 |     6,320     5,499 |     33,919
        1 |        87        67 |        598
        . |         0         0 |      7,609
-----------+----------------------+----------
    Total |     6,410     5,566 |     42,138
```

```
116
117 *************************************************************************
118 //Many diseases asked 1st wave, then only if report no, asked again 2nd wave
119 //wave 2,3=7 if report yes in wave 1
120 //use a program over several diseases since pattern is the same
121
122 la def sr_prev_rept 0 "No" 1 "Yes" 7 "Previously reported"

123
124 capture program drop prev_report

125 program define prev_report
  1.          args dis num
  2.
126          gen sr_`dis'_raw=.
  3.                  forvalues w=1/$w{
  4.                          replace sr_`dis'_raw=1 if disescn`num'==1 & wave==`
 > w'
  5.                          replace sr_`dis'_raw=0 if disescn`num'==2 & wave==`
 > w'
  6.                          replace sr_`dis'_raw=7 if disescn`num'==7 & wave==`
 > w'
  7.                          replace sr_`dis'_raw=-7 if disescn`num'==-7 & wave=
 > =`w'
  8.                          replace sr_`dis'_raw=-8 if disescn`num'==-8 & wave=
 > =`w'
  9.                  }
 10.
127          la val sr_`dis'_raw sr_prev_rept
 11.          tab sr_`dis'_raw wave if ivw_type==1, missing
 12.
```

```
128          gen sr_`dis'_ever = 1 if inlist(sr_`dis'_raw,1,7) //if prev or curr re
   > port yes
   13.          replace sr_`dis'_ever = 0 if sr_`dis'_raw==0
   14.          replace sr_`dis'_ever = -7 if sr_`dis'_raw==-7
   15.          replace sr_`dis'_ever = -8 if sr_`dis'_raw==-8
   16.          tab sr_`dis'_ever sr_`dis'_raw, missing
   17.          tab sr_`dis'_ever wave if ivw_type==1, missing
   18.
129          gen sr_`dis'_new=sr_`dis'_raw if inrange(wave,2,$w)
   19.          replace sr_`dis'_new=0 if sr_`dis'_raw==7
   20.          tab sr_`dis'_new if inrange(wave,2,$w) & ivw_type==1, missing
   21.
130          end

131
132 //now run programs for specific disease variables
133 prev_report heart_dis 2
  (47,778 missing values generated)
  (1,411 real changes made)
  (6,182 real changes made)
  (0 real changes made)
  (0 real changes made)
  (16 real changes made)
  (187 real changes made)
  (4,757 real changes made)
  (1,107 real changes made)
  (0 real changes made)
  (5 real changes made)
  (138 real changes made)
  (3,749 real changes made)
  (990 real changes made)
  (1 real change made)
  (6 real changes made)
  (94 real changes made)
  (3,022 real changes made)
  (917 real changes made)
  (0 real changes made)
  (4 real changes made)
  (724 real changes made)
  (5,963 real changes made)
  (868 real changes made)
  (0 real changes made)
  (21 real changes made)
  (160 real changes made)
  (4,932 real changes made)
  (1,303 real changes made)
  (0 real changes made)
  (15 real changes made)
  (130 real changes made)
  (4,240 real changes made)
  (1,186 real changes made)
  (0 real changes made)
  (10 real changes made)
```

		Survey wave			
sr_heart_dis_raw	1	2	3	4	Total
-8	16	5	6	4	77
-7	0	0	1	0	1
No	6,182	4,757	3,749	3,022	32,845
Yes	1,411	187	138	94	2,844
Previously reported	0	1,107	990	917	6,371
Total	7,609	6,056	4,884	4,037	42,138

```
                    |              Survey wave
   sr_heart_dis_raw |         5           6           7 |      Total
--------------------+----------------------------------+----------
                 -8 |        21          15          10 |         77
                 -7 |         0           0           0 |          1
                 No |     5,963       4,932       4,240 |     32,845
                Yes |       724         160         130 |      2,844
Previously reported |       868       1,303       1,186 |      6,371
--------------------+----------------------------------+----------
              Total |     7,576       6,410       5,566 |     42,138
```

(38,563 missing values generated)
(32,845 real changes made)
(1 real change made)
(77 real changes made)

```
sr_heart_d |                    sr_heart_dis_raw
  is_ever  |       -8         -7         No        Yes  Previousl |     Total
-----------+-----------------------------------------------------+----------
       -8  |       77          0          0          0          0 |        77
       -7  |        0          1          0          0          0 |         1
        0  |        0          0     32,845          0          0 |    32,845
        1  |        0          0          0      2,844      6,371 |     9,215
        .  |        0          0          0          0          0 |     5,640
-----------+-----------------------------------------------------+----------
    Total  |       77          1     32,845      2,844      6,371 |    47,778
```

```
           | sr_heart_d
sr_heart_d | is_raw
  is_ever  |         . |      Total
-----------+-----------+----------
       -8  |         0 |        77
       -7  |         0 |         1
        0  |         0 |    32,845
        1  |         0 |     9,215
        .  |     5,640 |     5,640
-----------+-----------+----------
    Total  |     5,640 |    47,778
```

```
sr_heart_d |                       Survey wave
  is_ever  |        1          2          3          4          5 |      Total
-----------+-----------------------------------------------------+----------
       -8  |       16          5          6          4         21 |        77
       -7  |        0          0          1          0          0 |         1
        0  |    6,182      4,757      3,749      3,022      5,963 |    32,845
        1  |    1,411      1,294      1,128      1,011      1,592 |     9,215
-----------+-----------------------------------------------------+----------
    Total  |    7,609      6,056      4,884      4,037      7,576 |    42,138
```

```
sr_heart_d |     Survey wave
  is_ever  |        6          7 |      Total
-----------+--------------------+----------
       -8  |       15         10 |        77
       -7  |        0          0 |         1
        0  |    4,932      4,240 |    32,845
        1  |    1,463      1,316 |     9,215
-----------+--------------------+----------
    Total  |    6,410      5,566 |    42,138
```

(13,249 missing values generated)
(6,371 real changes made)

```
 sr_heart_di |
      s_new |      Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |         61         0.18         0.18
         -7 |          1         0.00         0.18
          0 |     33,034        95.67        95.85
          1 |      1,433         4.15       100.00
------------+-----------------------------------
      Total |     34,529       100.00
```

134 prev_report htn 3
(47,778 missing values generated)
(5,108 real changes made)
(2,491 real changes made)
(0 real changes made)
(0 real changes made)
(10 real changes made)
(146 real changes made)
(1,840 real changes made)
(4,066 real changes made)
(0 real changes made)
(4 real changes made)
(124 real changes made)
(1,359 real changes made)
(3,394 real changes made)
(0 real changes made)
(7 real changes made)
(76 real changes made)
(1,042 real changes made)
(2,916 real changes made)
(0 real changes made)
(3 real changes made)
(2,674 real changes made)
(2,221 real changes made)
(2,671 real changes made)
(0 real changes made)
(10 real changes made)
(111 real changes made)
(1,786 real changes made)
(4,510 real changes made)
(0 real changes made)
(3 real changes made)
(92 real changes made)
(1,481 real changes made)
(3,987 real changes made)
(0 real changes made)
(6 real changes made)

```
                    |                  Survey wave
         sr_htn_raw |       1         2         3         4 |      Total
--------------------+-------------------------------------------+----------
                -8 |      10         4         7         3 |         43
                No |   2,491     1,840     1,359     1,042 |     12,220
               Yes |   5,108       146       124        76 |      8,331
 Previously reported |      0     4,066     3,394     2,916 |     21,544
--------------------+-------------------------------------------+----------
              Total |   7,609     6,056     4,884     4,037 |     42,138
```

```
                    |              Survey wave
         sr_htn_raw |       5         6         7 |      Total
--------------------+-------------------------------------+----------
                -8 |      10         3         6 |         43
                No |   2,221     1,786     1,481 |     12,220
               Yes |   2,674       111        92 |      8,331
 Previously reported |   2,671     4,510     3,987 |     21,544
--------------------+-------------------------------------+----------
              Total |   7,576     6,410     5,566 |     42,138
```

(17,903 missing values generated)
(12,220 real changes made)
(0 real changes made)
(43 real changes made)

```
sr_htn_eve |                        sr_htn_raw
         r |        -8         No        Yes  Previousl          . |      Total
-----------+------------------------------------------------------------+----------
        -8 |        43          0          0          0          0 |         43
         0 |         0     12,220          0          0          0 |     12,220
         1 |         0          0      8,331     21,544          0 |     29,875
         . |         0          0          0          0      5,640 |      5,640
-----------+------------------------------------------------------------+----------
     Total |        43     12,220      8,331     21,544      5,640 |     47,778
```

```
sr_htn_eve |                        Survey wave
         r |         1          2          3          4          5 |      Total
-----------+------------------------------------------------------------+----------
        -8 |        10          4          7          3         10 |         43
         0 |     2,491      1,840      1,359      1,042      2,221 |     12,220
         1 |     5,108      4,212      3,518      2,992      5,345 |     29,875
-----------+------------------------------------------------------------+----------
     Total |     7,609      6,056      4,884      4,037      7,576 |     42,138
```

```
sr_htn_eve |     Survey wave
         r |         6          7 |      Total
-----------+----------------------+----------
        -8 |         3          6 |         43
         0 |     1,786      1,481 |     12,220
         1 |     4,621      4,079 |     29,875
-----------+----------------------+----------
     Total |     6,410      5,566 |     42,138
```

(13,249 missing values generated)
(21,544 real changes made)

```
sr_htn_new |      Freq.     Percent        Cum.
-----------+---------------------------------
        -8 |         33        0.10        0.10
         0 |     31,273       90.57       90.67
         1 |      3,223        9.33      100.00
-----------+---------------------------------
     Total |     34,529      100.00
```

135 prev_report ra 4
  (47,778 missing values generated)
  (4,248 real changes made)
  (3,345 real changes made)
  (0 real changes made)
  (1 real change made)
  (15 real changes made)
  (277 real changes made)
  (2,399 real changes made)
  (3,378 real changes made)
  (0 real changes made)
  (2 real changes made)
  (190 real changes made)
  (1,753 real changes made)
  (2,934 real changes made)
  (0 real changes made)
  (7 real changes made)
  (127 real changes made)
  (1,344 real changes made)
  (2,563 real changes made)
  (0 real changes made)
  (3 real changes made)
  (2,268 real changes made)
  (2,896 real changes made)
  (2,402 real changes made)
  (0 real changes made)

```
(10 real changes made)
(283 real changes made)
(2,153 real changes made)
(3,972 real changes made)
(0 real changes made)
(2 real changes made)
(158 real changes made)
(1,726 real changes made)
(3,677 real changes made)
(0 real changes made)
(5 real changes made)
```

		Survey wave			
sr_ra_raw	1	2	3	4	Total
-8	15	2	7	3	44
-7	1	0	0	0	1
No	3,345	2,399	1,753	1,344	15,616
Yes	4,248	277	190	127	7,551
Previously reported	0	3,378	2,934	2,563	18,926
Total	7,609	6,056	4,884	4,037	42,138

		Survey wave		
sr_ra_raw	5	6	7	Total
-8	10	2	5	44
-7	0	0	0	1
No	2,896	2,153	1,726	15,616
Yes	2,268	283	158	7,551
Previously reported	2,402	3,972	3,677	18,926
Total	7,576	6,410	5,566	42,138

```
(21,301 missing values generated)
(15,616 real changes made)
(1 real change made)
(44 real changes made)
```

			sr_ra_raw			
sr_ra_ever	-8	-7	No	Yes	Previousl	Total
-8	44	0	0	0	0	44
-7	0	1	0	0	0	1
0	0	0	15,616	0	0	15,616
1	0	0	0	7,551	18,926	26,477
.	0	0	0	0	0	5,640
Total	44	1	15,616	7,551	18,926	47,778

	sr_ra_raw	
sr_ra_ever	.	Total
-8	0	44
-7	0	1
0	0	15,616
1	0	26,477
.	5,640	5,640
Total	5,640	47,778

```
            |                     Survey wave
  sr_ra_ever |         1         2         3         4         5 |     Total
  -----------+-------------------------------------------------------+----------
          -8 |        15         2         7         3        10 |        44
          -7 |         1         0         0         0         0 |         1
           0 |     3,345     2,399     1,753     1,344     2,896 |    15,616
           1 |     4,248     3,655     3,124     2,690     4,670 |    26,477
  -----------+-------------------------------------------------------+----------
       Total |     7,609     6,056     4,884     4,037     7,576 |    42,138


            |     Survey wave
  sr_ra_ever |         6         7 |     Total
  -----------+---------------------+----------
          -8 |         2         5 |        44
          -7 |         0         0 |         1
           0 |     2,153     1,726 |    15,616
           1 |     4,255     3,835 |    26,477
  -----------+---------------------+----------
       Total |     6,410     5,566 |    42,138

  (13,249 missing values generated)
  (18,926 real changes made)

   sr_ra_new |      Freq.     Percent        Cum.
  -----------+-----------------------------------
          -8 |         29        0.08        0.08
           0 |     31,197       90.35       90.43
           1 |      3,303        9.57      100.00
  -----------+-----------------------------------
       Total |     34,529      100.00

136 prev_report osteoprs 5
  (47,778 missing values generated)
  (1,559 real changes made)
  (6,023 real changes made)
  (0 real changes made)
  (0 real changes made)
  (27 real changes made)
  (172 real changes made)
  (4,628 real changes made)
  (1,242 real changes made)
  (0 real changes made)
  (14 real changes made)
  (158 real changes made)
  (3,558 real changes made)
  (1,155 real changes made)
  (1 real change made)
  (12 real changes made)
  (100 real changes made)
  (2,835 real changes made)
  (1,086 real changes made)
  (0 real changes made)
  (16 real changes made)
  (803 real changes made)
  (5,672 real changes made)
  (1,064 real changes made)
  (0 real changes made)
  (37 real changes made)
  (209 real changes made)
  (4,603 real changes made)
  (1,584 real changes made)
  (0 real changes made)
  (14 real changes made)
  (164 real changes made)
  (3,842 real changes made)
  (1,549 real changes made)
  (0 real changes made)
  (11 real changes made)
```

```
                   |              Survey wave
   sr_osteoprs_raw |        1          2          3          4 |      Total
-------------------+--------------------------------------------+----------
                -8 |       27         14         12         16 |        131
                -7 |        0          0          1          0 |          1
                No |    6,023      4,628      3,558      2,835 |     31,161
               Yes |    1,559        172        158        100 |      3,165
Previously reported |       0      1,242      1,155      1,086 |      7,680
-------------------+--------------------------------------------+----------
             Total |    7,609      6,056      4,884      4,037 |     42,138


                   |              Survey wave
   sr_osteoprs_raw |        5          6          7 |      Total
-------------------+--------------------------------+----------
                -8 |       37         14         11 |        131
                -7 |        0          0          0 |          1
                No |    5,672      4,603      3,842 |     31,161
               Yes |      803        209        164 |      3,165
Previously reported |   1,064      1,584      1,549 |      7,680
-------------------+--------------------------------+----------
             Total |    7,576      6,410      5,566 |     42,138
```

(36,933 missing values generated)
(31,161 real changes made)
(1 real change made)
(131 real changes made)

```
sr_osteopr |                    sr_osteoprs_raw
    s_ever |       -8         -7         No        Yes  Previousl |      Total
-----------+-----------------------------------------------------+----------
        -8 |      131          0          0          0          0 |        131
        -7 |        0          1          0          0          0 |          1
         0 |        0          0     31,161          0          0 |     31,161
         1 |        0          0          0      3,165      7,680 |     10,845
         . |        0          0          0          0          0 |      5,640
-----------+-----------------------------------------------------+----------
     Total |      131          1     31,161      3,165      7,680 |     47,778


           | sr_osteopr
sr_osteopr |    s_raw
    s_ever |        . |      Total
-----------+----------+----------
        -8 |        0 |        131
        -7 |        0 |          1
         0 |        0 |     31,161
         1 |        0 |     10,845
         . |    5,640 |      5,640
-----------+----------+----------
     Total |    5,640 |     47,778


sr_osteopr |                    Survey wave
    s_ever |        1          2          3          4          5 |      Total
-----------+-----------------------------------------------------+----------
        -8 |       27         14         12         16         37 |        131
        -7 |        0          0          1          0          0 |          1
         0 |    6,023      4,628      3,558      2,835      5,672 |     31,161
         1 |    1,559      1,414      1,313      1,186      1,867 |     10,845
-----------+-----------------------------------------------------+----------
     Total |    7,609      6,056      4,884      4,037      7,576 |     42,138
```

```
sr_osteopr |       Survey wave
   s_ever |        6           7 |     Total
-----------+----------------------+----------
       -8 |       14          11 |       131
       -7 |        0           0 |         1
        0 |    4,603       3,842 |    31,161
        1 |    1,793       1,713 |    10,845
-----------+----------------------+----------
    Total |    6,410       5,566 |    42,138
```

(13,249 missing values generated)
(7,680 real changes made)

```
sr_osteoprs |
      _new |      Freq.     Percent        Cum.
-----------+---------------------------------
        -8 |        104        0.30        0.30
        -7 |          1        0.00        0.30
         0 |     32,818       95.04       95.35
         1 |      1,606        4.65      100.00
-----------+---------------------------------
     Total |     34,529      100.00
```

137 prev_report diabetes 6
(47,778 missing values generated)
(1,925 real changes made)
(5,681 real changes made)
(0 real changes made)
(1 real change made)
(2 real changes made)
(88 real changes made)
(4,444 real changes made)
(1,522 real changes made)
(0 real changes made)
(2 real changes made)
(54 real changes made)
(3,543 real changes made)
(1,283 real changes made)
(1 real change made)
(3 real changes made)
(44 real changes made)
(2,888 real changes made)
(1,102 real changes made)
(0 real changes made)
(3 real changes made)
(1,099 real changes made)
(5,431 real changes made)
(1,037 real changes made)
(0 real changes made)
(9 real changes made)
(86 real changes made)
(4,541 real changes made)
(1,783 real changes made)
(0 real changes made)
(0 real changes made)
(59 real changes made)
(3,907 real changes made)
(1,597 real changes made)
(0 real changes made)
(3 real changes made)
```

```
                    |              Survey wave
    sr_diabetes_raw |      1         2         3         4 |     Total
--------------------+------------------------------------------+----------
                -8 |      2         2         3         3 |        22
                -7 |      1         0         1         0 |         2
                No |  5,681     4,444     3,543     2,888 |    30,435
               Yes |  1,925        88        54        44 |     3,355
Previously reported |      0     1,522     1,283     1,102 |     8,324
--------------------+------------------------------------------+----------
             Total |  7,609     6,056     4,884     4,037 |    42,138
```

```
                   |             Survey wave
    sr_diabetes_raw |        5            6            7 |     Total
-------------------+--------------------------------+----------
               -8 |        9            0            3 |        22
               -7 |        0            0            0 |         2
               No |    5,431        4,541        3,907 |    30,435
              Yes |    1,099           86           59 |     3,355
Previously reported |    1,037        1,783        1,597 |     8,324
-------------------+--------------------------------+----------
            Total |    7,576        6,410        5,566 |    42,138
```

(36,099 missing values generated)
(30,435 real changes made)
(2 real changes made)
(22 real changes made)

```
sr_diabete |                      sr_diabetes_raw
    s_ever |       -8          -7          No         Yes   Previousl |      Total
-----------+----------------------------------------------------------+----------
       -8 |       22           0           0           0           0 |         22
       -7 |        0           2           0           0           0 |          2
        0 |        0           0      30,435           0           0 |     30,435
        1 |        0           0           0       3,355       8,324 |     11,679
        . |        0           0           0           0           0 |      5,640
-----------+----------------------------------------------------------+----------
    Total |       22           2      30,435       3,355       8,324 |     47,778
```

```
           | sr_diabete
sr_diabete |   s_raw
    s_ever |        .  |      Total
-----------+-----------+----------
       -8 |        0  |         22
       -7 |        0  |          2
        0 |        0  |     30,435
        1 |        0  |     11,679
        . |    5,640  |      5,640
-----------+-----------+----------
    Total |    5,640  |     47,778
```

```
sr_diabete |                      Survey wave
    s_ever |        1           2           3           4           5 |      Total
-----------+----------------------------------------------------------+----------
       -8 |        2           2           3           3           9 |         22
       -7 |        1           0           1           0           0 |          2
        0 |    5,681       4,444       3,543       2,888       5,431 |     30,435
        1 |    1,925       1,610       1,337       1,146       2,136 |     11,679
-----------+----------------------------------------------------------+----------
    Total |    7,609       6,056       4,884       4,037       7,576 |     42,138
```

```
sr_diabete |      Survey wave
    s_ever |        6            7  |      Total
-----------+---------------------+----------
       -8 |        0            3  |         22
       -7 |        0            0  |          2
        0 |    4,541        3,907  |     30,435
        1 |    1,869        1,656  |     11,679
-----------+---------------------+----------
    Total |    6,410        5,566  |     42,138
```

(13,249 missing values generated)
(8,324 real changes made)

```
 sr_diabetes |
        _new |       Freq.       Percent        Cum.
------------+-----------------------------------
         -8 |          20          0.06         0.06
         -7 |           1          0.00         0.06
          0 |      33,078         95.80        95.86
          1 |       1,430          4.14       100.00
------------+-----------------------------------
      Total |      34,529        100.00
```

138 prev_report lung_dis 7
(47,778 missing values generated)
(1,154 real changes made)
(6,450 real changes made)
(0 real changes made)
(0 real changes made)
(5 real changes made)
(135 real changes made)
(5,033 real changes made)
(884 real changes made)
(0 real changes made)
(4 real changes made)
(106 real changes made)
(3,979 real changes made)
(795 real changes made)
(1 real change made)
(3 real changes made)
(75 real changes made)
(3,223 real changes made)
(736 real changes made)
(0 real changes made)
(3 real changes made)
(679 real changes made)
(6,181 real changes made)
(710 real changes made)
(0 real changes made)
(6 real changes made)
(111 real changes made)
(5,126 real changes made)
(1,170 real changes made)
(0 real changes made)
(3 real changes made)
(102 real changes made)
(4,375 real changes made)
(1,083 real changes made)
(0 real changes made)
(6 real changes made)

```
                   |                   Survey wave
  sr_lung_dis_raw  |       1         2         3         4  |    Total
-------------------+-------------------------------------+----------
               -8  |       5         4         3         3  |       30
               -7  |       0         0         1         0  |        1
               No  |   6,450     5,033     3,979     3,223  |   34,367
              Yes  |   1,154       135       106        75  |    2,362
Previously reported|       0       884       795       736  |    5,378
-------------------+-------------------------------------+----------
            Total  |   7,609     6,056     4,884     4,037  |   42,138
```

```
                   |             Survey wave
  sr_lung_dis_raw  |       5         6         7  |    Total
-------------------+-------------------------------+----------
               -8  |       6         3         6  |       30
               -7  |       0         0         0  |        1
               No  |   6,181     5,126     4,375  |   34,367
              Yes  |     679       111       102  |    2,362
Previously reported|     710     1,170     1,083  |    5,378
-------------------+-------------------------------+----------
            Total  |   7,576     6,410     5,566  |   42,138
```

```
(40,038 missing values generated)
(34,367 real changes made)
(1 real change made)
(30 real changes made)
```

```
sr_lung_di |                       sr_lung_dis_raw
    s_ever |       -8          -7          No         Yes   Previousl |      Total
-----------+-------------------------------------------------------------+----------
        -8 |       30           0           0           0           0 |         30
        -7 |        0           1           0           0           0 |          1
         0 |        0           0      34,367           0           0 |     34,367
         1 |        0           0           0       2,362       5,378 |      7,740
         . |        0           0           0           0           0 |      5,640
-----------+-------------------------------------------------------------+----------
     Total |       30           1      34,367       2,362       5,378 |     47,778
```

```
           | sr_lung_di
sr_lung_di |   s_raw
    s_ever |        . |      Total
-----------+----------+----------
        -8 |        0 |         30
        -7 |        0 |      34,367
         0 |        0 |      34,367
         1 |        0 |      7,740
         . |    5,640 |      5,640
-----------+----------+----------
     Total |    5,640 |     47,778
```

```
sr_lung_di |                       Survey wave
    s_ever |        1           2           3           4           5 |      Total
-----------+-------------------------------------------------------------+----------
        -8 |        5           4           3           3           6 |         30
        -7 |        0           0           1           0           0 |          1
         0 |    6,450       5,033       3,979       3,223       6,181 |     34,367
         1 |    1,154       1,019         901         811       1,389 |      7,740
-----------+-------------------------------------------------------------+----------
     Total |    7,609       6,056       4,884       4,037       7,576 |     42,138
```

```
sr_lung_di |    Survey wave
    s_ever |        6           7 |      Total
-----------+----------------------+----------
        -8 |        3           6 |         30
        -7 |        0           0 |          1
         0 |    5,126       4,375 |     34,367
         1 |    1,281       1,185 |      7,740
-----------+----------------------+----------
     Total |    6,410       5,566 |     42,138
```

```
(13,249 missing values generated)
(5,378 real changes made)
```

```
sr_lung_dis |
      _new |      Freq.     Percent        Cum.
-----------+--------------------------------
        -8 |         25        0.07        0.07
        -7 |          1        0.00        0.08
         0 |     33,295       96.43       96.50
         1 |      1,208        3.50      100.00
-----------+--------------------------------
     Total |     34,529      100.00
```

```
139 prev_report dementia 9
    (47,778 missing values generated)
    (457 real changes made)
    (7,146 real changes made)
    (0 real changes made)
    (0 real changes made)
    (6 real changes made)
    (136 real changes made)
    (5,611 real changes made)
    (305 real changes made)
    (0 real changes made)
    (4 real changes made)
    (126 real changes made)
    (4,455 real changes made)
    (297 real changes made)
    (1 real change made)
    (5 real changes made)
    (95 real changes made)
    (3,658 real changes made)
    (283 real changes made)
    (0 real changes made)
    (1 real change made)
    (288 real changes made)
    (6,994 real changes made)
    (283 real changes made)
    (1 real change made)
    (10 real changes made)
    (147 real changes made)
    (5,865 real changes made)
    (393 real changes made)
    (0 real changes made)
    (5 real changes made)
    (122 real changes made)
    (5,058 real changes made)
    (384 real changes made)
    (0 real changes made)
    (2 real changes made)
```

		Survey wave			
sr_dementia_raw	1	2	3	4	Total
-8	6	4	5	1	33
-7	0	0	1	0	2
No	7,146	5,611	4,455	3,658	38,787
Yes	457	136	126	95	1,371
Previously reported	0	305	297	283	1,945
Total	7,609	6,056	4,884	4,037	42,138

		Survey wave		
sr_dementia_raw	5	6	7	Total
-8	10	5	2	33
-7	1	0	0	2
No	6,994	5,865	5,058	38,787
Yes	288	147	122	1,371
Previously reported	283	393	384	1,945
Total	7,576	6,410	5,566	42,138

```
    (44,462 missing values generated)
    (38,787 real changes made)
    (2 real changes made)
    (33 real changes made)
```

```
sr_dementi |                         sr_dementia_raw
   a_ever |        -8         -7         No        Yes  Previousl |      Total
-----------+-------------------------------------------------------+----------
       -8 |        33          0          0          0          0 |        33
       -7 |         0          2          0          0          0 |         2
        0 |         0          0     38,787          0          0 |    38,787
        1 |         0          0          0      1,371      1,945 |     3,316
        . |         0          0          0          0          0 |     5,640
-----------+-------------------------------------------------------+----------
    Total |        33          2     38,787      1,371      1,945 |    47,778
```

```
           | sr_dementi
sr_dementi |  a_raw
   a_ever |         .  |      Total
-----------+-----------+----------
       -8 |         0  |        33
       -7 |         0  |         2
        0 |         0  |    38,787
        1 |         0  |     3,316
        . |     5,640  |     5,640
-----------+-----------+----------
    Total |     5,640  |    47,778
```

```
sr_dementi |                         Survey wave
   a_ever |         1          2          3          4          5 |      Total
-----------+-------------------------------------------------------+----------
       -8 |         6          4          5          1         10 |        33
       -7 |         0          0          1          0          1 |         2
        0 |     7,146      5,611      4,455      3,658      6,994 |    38,787
        1 |       457        441        423        378        571 |     3,316
-----------+-------------------------------------------------------+----------
    Total |     7,609      6,056      4,884      4,037      7,576 |    42,138
```

```
sr_dementi |      Survey wave
   a_ever |         6          7  |      Total
-----------+----------------------+----------
       -8 |         5          2  |        33
       -7 |         0          0  |         2
        0 |     5,865      5,058  |    38,787
        1 |       540        506  |     3,316
-----------+----------------------+----------
    Total |     6,410      5,566  |    42,138
```

(13,249 missing values generated)
(1,945 real changes made)

```
sr_dementia |
      _new |      Freq.     Percent        Cum.
-----------+---------------------------------
       -8 |         27        0.08        0.08
       -7 |          2        0.01        0.08
        0 |     33,586       97.27       97.35
        1 |        914        2.65      100.00
-----------+---------------------------------
    Total |     34,529      100.00
```

140

```
141 la var sr_heart_dis_ever "Self report Heart Disease"

142 la var sr_heart_dis_new "Self report Heart Disease since prev year"

143 la var sr_htn_ever "Self report high blood pressure"

144 la var sr_htn_new "Self report high blood pressure since prev year"

145 la var sr_ra_ever "Self report arthritis"

146 la var sr_ra_new "Self report arthritis since prev year"

147 la var sr_osteoprs_ever "Self report osteoporosis"

148 la var sr_osteoprs_new "Self report osteoporosis since prev year"

149 la var sr_diabetes_ever "Self report diabetes"

150 la var sr_diabetes_new "Self report diabetes since prev year"

151 la var sr_lung_dis_ever "Self report Lung Disease"

152 la var sr_lung_dis_new "Self report Lung Disease since prev year"

153 la var sr_dementia_ever "Self report Dementia"

154 la var sr_dementia_new "Self report Dementia since prev year"

155
156
157 notes sr_heart_dis_raw: disescn2

158 notes sr_heart_dis_raw: Had any heart disease including angina or CHF (self-re
  > port)

159 notes sr_heart_dis_ever: sr_heart_dis_raw

160 notes sr_heart_dis_ever: Had heart disease ever (self-report)

161 notes sr_heart_dis_new:  sr_heart_dis_raw

162 notes sr_heart_dis_new: Had heart disease since prev interview (self-report).

163
164 notes sr_htn_raw: disescn3

165 notes sr_htn_raw: Had High blood pressure (self-report)

166 notes sr_htn_ever: sr_htn_raw

167 notes sr_htn_ever: Had High blood pressure ever (self-report)

168 notes sr_htn_new:   sr_htn_raw

169 notes sr_htn_new: Had High blood pressure since prev interview (self-report).

170
171 notes sr_ra_raw: disescn4

172 notes sr_ra_raw: Had arthritis (including osteo or rheumatoid) (self-report)
```

```
173 notes sr_ra_ever: sr_ra_raw

174 notes sr_ra_ever: Had arthritis ever (self-report)

175 notes sr_ra_new:  sr_ra_raw

176 notes sr_ra_new: Had arthritis since prev interview (self-report).

177
178 notes sr_osteoprs_raw: disescn5

179 notes sr_osteoprs_raw: Had osteoporosis (self-report)

180 notes sr_osteoprs_ever: sr_osteoprs_raw

181 notes sr_osteoprs_ever: Had osteoporosis ever (self-report)

182 notes sr_osteoprs_new:  sr_osteoprs_raw

183 notes sr_osteoprs_new: Had osteoporosis since prev interview (self-report).

184
185 notes sr_diabetes_raw: disescn6

186 notes sr_diabetes_raw: Had arthritis (including osteo or rheumatoid) (self-rep
  > ort)

187 notes sr_diabetes_ever: sr_diabetes_raw

188 notes sr_diabetes_ever: Had diabetes ever (self-report)

189 notes sr_diabetes_new:  sr_diabetes_raw

190 notes sr_diabetes_new: Had diabetes since prev interview (self-report).

191
192 notes sr_lung_dis_raw: disescn7

193 notes sr_lung_dis_raw: Had any lung disease, such as emphysema, asthma, or chr
  > onic bronchitis (self-report)

194 notes sr_lung_dis_ever: sr_lung_dis_raw

195 notes sr_lung_dis_ever: Had lung disease ever (self-report)

196 notes sr_lung_dis_new:  sr_lung_dis_raw

197 notes sr_lung_dis_new: Had lung disease since prev interview (self-report).

198
199 notes sr_dementia_raw: disescn9

200 notes sr_dementia_raw: Had dementia or Alzheimer's disease (self-report)

201 notes sr_dementia_ever: sr_dementia_raw

202 notes sr_dementia_ever: Had dementia ever (self-report)

203 notes sr_dementia_new:  sr_dementia_raw
```

```
204 notes sr_dementia_new: Had dementia since prev interview (self-report).

205
206 foreach x in sr_heart_dis_raw sr_heart_dis_ever sr_heart_dis_new sr_htn_raw sr
  > _htn_ever ///
  > sr_htn_new sr_ra_raw sr_ra_ever sr_ra_new sr_osteoprs_raw sr_osteoprs_ever sr_
  > osteoprs_new ///
  > sr_diabetes_raw sr_diabetes_ever sr_diabetes_new sr_lung_dis_raw sr_lung_dis_e
  > ver ///
  > sr_lung_dis_new sr_dementia_raw sr_dementia_ever sr_dementia_new{
   2.
207 notes `x': Located in NHATS Setup, under Part 4.
   3. notes `x': Updated: 04/15/19-MH
   4. }

208
209 **************************************************
210 //Depression & Anxiety
211 //Over the last month how often have you:
212 //responses are 1=not at all, 2=several days, 3=more than half days, 4=nearly
  > every day
213 **************************************************
214 gen sr_depr_pqq1=.
  (47,778 missing values generated)

215 gen sr_depr_pqq2=.
  (47,778 missing values generated)

216 gen sr_anx_gad1=.
  (47,778 missing values generated)

217 gen sr_anx_gad2=.
  (47,778 missing values generated)

218
219 forvalues w=1/$w{
   2.          //set up new variables for individual wave variables
220       foreach q in 1 2 3 4 {
   3.          gen temp_hc`w'deprsan`q'=. if inlist(depresan`q',-9,-8,-7,-1) & wav
  > e==`w'
   4.          replace temp_hc`w'deprsan`q'=depresan`q'-1 if inlist(depresan`q',1,
  > 2,3,4) & wave==`w'
   5.          replace temp_hc`w'deprsan`q'=0 if inlist(depresan`q',-8,-7) & wave=
  > =`w'
   6.          }
   7.          //now create clean depression, anxiety variables
221       replace sr_depr_pqq1=temp_hc`w'deprsan1 if wave==`w' //little interest
  > or pleasure in doing things
   8.          replace sr_depr_pqq2=temp_hc`w'deprsan2 if wave==`w' //felt down/de
  > pressed/hopeless
   9.          replace sr_anx_gad1=temp_hc`w'deprsan3 if wave==`w' //felt nervous
  > or anxious
  10.          replace sr_anx_gad2=temp_hc`w'deprsan4 if wave==`w' //unable to sto
  > p worrying
  11.
222
223       foreach q in 1 2 3 4 {
  12.          drop temp_hc`w'deprsan`q'
  13.          }
  14.
```

```
224 }
   (47,778 missing values generated)
   (7,564 real changes made)
   (45 real changes made)
   (47,778 missing values generated)
   (7,579 real changes made)
   (30 real changes made)
   (47,778 missing values generated)
   (7,579 real changes made)
   (30 real changes made)
   (47,778 missing values generated)
   (7,580 real changes made)
   (29 real changes made)
   (7,609 real changes made)
   (7,609 real changes made)
   (7,609 real changes made)
   (7,609 real changes made)
   (47,778 missing values generated)
   (6,010 real changes made)
   (46 real changes made)
   (47,778 missing values generated)
   (6,031 real changes made)
   (25 real changes made)
   (47,778 missing values generated)
   (6,034 real changes made)
   (22 real changes made)
   (47,778 missing values generated)
   (6,018 real changes made)
   (38 real changes made)
   (6,056 real changes made)
   (6,056 real changes made)
   (6,056 real changes made)
   (6,056 real changes made)
   (47,778 missing values generated)
   (4,844 real changes made)
   (40 real changes made)
   (47,778 missing values generated)
   (4,854 real changes made)
   (30 real changes made)
   (47,778 missing values generated)
   (4,853 real changes made)
   (31 real changes made)
   (47,778 missing values generated)
   (4,842 real changes made)
   (42 real changes made)
   (4,884 real changes made)
   (4,884 real changes made)
   (4,884 real changes made)
   (4,884 real changes made)
   (47,778 missing values generated)
   (3,998 real changes made)
   (39 real changes made)
   (47,778 missing values generated)
   (4,010 real changes made)
   (27 real changes made)
   (47,778 missing values generated)
   (4,015 real changes made)
   (22 real changes made)
   (47,778 missing values generated)
   (4,008 real changes made)
   (29 real changes made)
   (4,037 real changes made)
   (4,037 real changes made)
   (4,037 real changes made)
   (4,037 real changes made)
   (47,778 missing values generated)
   (7,520 real changes made)
   (56 real changes made)
   (47,778 missing values generated)
   (7,534 real changes made)
   (42 real changes made)
   (47,778 missing values generated)
```

```
(7,540 real changes made)
(36 real changes made)
(47,778 missing values generated)
(7,517 real changes made)
(59 real changes made)
(7,576 real changes made)
(7,576 real changes made)
(7,576 real changes made)
(7,576 real changes made)
(47,778 missing values generated)
(6,365 real changes made)
(45 real changes made)
(47,778 missing values generated)
(6,379 real changes made)
(31 real changes made)
(47,778 missing values generated)
(6,376 real changes made)
(34 real changes made)
(47,778 missing values generated)
(6,368 real changes made)
(42 real changes made)
(6,410 real changes made)
(6,410 real changes made)
(6,410 real changes made)
(6,410 real changes made)
(47,778 missing values generated)
(5,538 real changes made)
(28 real changes made)
(47,778 missing values generated)
(5,531 real changes made)
(35 real changes made)
(47,778 missing values generated)
(5,540 real changes made)
(26 real changes made)
(47,778 missing values generated)
(5,535 real changes made)
(31 real changes made)
(5,566 real changes made)
(5,566 real changes made)
(5,566 real changes made)
(5,566 real changes made)

225
226 la def depr_anx 0"Not at all" 1"Several days" 2"More than half the days" ///
  > 3"Nearly every day"

227 la val sr_depr_pqq1 sr_depr_pqq2 sr_anx_gad1 sr_anx_gad2 depr_anx

228 la var sr_depr_pqq1 "How often little interest in doing things?"

229 la var sr_depr_pqq2 "How often felt down, depressed, hopeless?"

230 la var sr_anx_gad1 "How often felt nervous or anxious?"

231 la var sr_anx_gad2 "How often unable to stop worrying?"

232
233 foreach v in sr_depr_pqq1 sr_depr_pqq2 sr_anx_gad1 sr_anx_gad2{
  2.        tab `v' wave if ivw_type==1,missing
  3. }

    How often little |
    interest in doing |              Survey wave
           things? |      1         2         3         4 |     Total
---------------------+--------------------------------------------+----------
        Not at all |    4,843     3,847     3,091     2,540 |    26,678
      Several days |    1,561     1,327     1,093       900 |     9,238
More than half the da |      556       446       329       304 |     3,092
   Nearly every day |      649       436       371       293 |     3,130
---------------------+--------------------------------------------+----------
            Total |    7,609     6,056     4,884     4,037 |    42,138
```

How often little interest in doing things?	Survey wave			Total
	5	6	7	
Not at all	4,819	4,058	3,480	26,678
Several days	1,637	1,432	1,288	9,238
More than half the da	565	481	411	3,092
Nearly every day	555	439	387	3,130
Total	7,576	6,410	5,566	42,138

How often felt down, depressed, hopeless?	Survey wave				Total
	1	2	3	4	
Not at all	5,336	4,301	3,479	2,868	30,212
Several days	1,589	1,258	999	873	8,588
More than half the da	353	282	199	160	1,799
Nearly every day	331	215	207	136	1,539
Total	7,609	6,056	4,884	4,037	42,138

How often felt down, depressed, hopeless?	Survey wave			Total
	5	6	7	
Not at all	5,489	4,644	4,095	30,212
Several days	1,529	1,276	1,064	8,588
More than half the da	298	279	228	1,799
Nearly every day	260	211	179	1,539
Total	7,576	6,410	5,566	42,138

How often felt nervous or anxious?	Survey wave				Total
	1	2	3	4	
Not at all	4,840	3,962	3,139	2,631	27,544
Several days	2,011	1,574	1,332	1,085	10,988
More than half the da	382	265	199	156	1,859
Nearly every day	376	255	214	165	1,747
Total	7,609	6,056	4,884	4,037	42,138

How often felt nervous or anxious?	Survey wave			Total
	5	6	7	
Not at all	5,008	4,256	3,708	27,544
Several days	1,946	1,630	1,410	10,988
More than half the da	328	286	243	1,859
Nearly every day	294	238	205	1,747
Total	7,576	6,410	5,566	42,138

How often unable to stop worrying?	Survey wave				Total
	1	2	3	4	
Not at all	5,456	4,420	3,635	2,950	30,805
Several days	1,283	1,015	773	716	7,169
More than half the da	357	256	195	144	1,763
Nearly every day	513	365	281	227	2,401
Total	7,609	6,056	4,884	4,037	42,138

```
   How often unable to |          Survey wave
        stop worrying? |      5          6          7 |     Total
---------------------+-------------------------------+----------
          Not at all |   5,517      4,699      4,128 |    30,805
        Several days |   1,336      1,134        912 |     7,169
More than half the da |     325        247        239 |     1,763
     Nearly every day |     398        330        287 |     2,401
---------------------+-------------------------------+----------
               Total |   7,576      6,410      5,566 |    42,138
```

234
235 //combined phq-2 score for depression, cutoff 3+=depressed
236 gen sr_phq2_score=sr_depr_pqq1+sr_depr_pqq2
  (5,640 missing values generated)

237 gen sr_phq2_depressed=1 if sr_phq2_score>=3 & sr_phq2_score~=.
  (41,758 missing values generated)

238 replace sr_phq2_depressed=0 if sr_phq2_score<3 & sr_phq2_score~=.
  (36,118 real changes made)

239 la var sr_phq2_score "PHQ-2 combined score 0-6 scale"

240 la var sr_phq2_depressed "Depressed per PHQ-2, score=3+"

241 tab sr_phq2_score sr_phq2_depressed if ivw_type==1, missing

```
      PHQ-2 |
   combined | Depressed per PHQ-2,
  score 0-6 |       score=3+
      scale |         0          1 |     Total
-----------+----------------------+----------
          0 |    23,002          0 |    23,002
          1 |     7,476          0 |     7,476
          2 |     5,640          0 |     5,640
          3 |         0      3,234 |     3,234
          4 |         0      1,491 |     1,491
          5 |         0        577 |       577
          6 |         0        718 |       718
-----------+----------------------+----------
      Total |    36,118      6,020 |    42,138
```

242
243 //combined gad-2 score for anxiety, cutoff 3+=anxiety
244 gen sr_gad2_score=sr_anx_gad1+sr_anx_gad2
  (5,640 missing values generated)

245 gen sr_gad2_anxiety=1 if sr_gad2_score>=3 & sr_gad2_score~=.
  (42,862 missing values generated)

246 replace sr_gad2_anxiety=0 if sr_gad2_score<3 & sr_gad2_score~=.
  (37,222 real changes made)

247 la var sr_gad2_score "GAD-2 combined score 0-6 scale"

248 la var sr_gad2_anxiety "Anxiety per GAD-2, score=3+"

249 tab sr_gad2_score sr_gad2_anxiety if ivw_type==1, missing

```
      GAD-2 |
   combined |   Anxiety per GAD-2,
  score 0-6 |       score=3+
      scale |        0            1 |     Total
  ----------+----------------------+----------
          0 |   24,018            0 |    24,018
          1 |    8,356            0 |     8,356
          2 |    4,848            0 |     4,848
          3 |        0        2,088 |     2,088
          4 |        0        1,451 |     1,451
          5 |        0          537 |       537
          6 |        0          840 |       840
  ----------+----------------------+----------
      Total |   37,222        4,916 |    42,138
```

250 tab sr_gad2_anxiety wave, missing

```
    Anxiety |
 per GAD-2, |                          Survey wave
   score=3+ |        1          2          3          4          5 |     Total
  ----------+-------------------------------------------------------+----------
          0 |    6,581      5,308      4,320      3,593      6,728 |    37,222
          1 |    1,028        748        564        444        848 |     4,916
          . |      636      1,019        915        700        758 |     5,640
  ----------+-------------------------------------------------------+----------
      Total |    8,245      7,075      5,799      4,737      8,334 |    47,778
```

```
    Anxiety |
 per GAD-2, |     Survey wave
   score=3+ |        6          7 |     Total
  ----------+----------------------+----------
          0 |    5,721      4,971 |    37,222
          1 |      689        595 |     4,916
          . |      866        746 |     5,640
  ----------+----------------------+----------
      Total |    7,276      6,312 |    47,778
```

251
252 notes sr_depr_pqq1: deprsan1

253 notes sr_depr_pqq1: Last month had little interest/pleasure in doing things.

254 notes sr_depr_pqq2: deprsan2

255 notes sr_depr_pqq2: Last month felt down/depressed/hopeless.

256 notes sr_anx_gad1: deprsan3

257 notes sr_anx_gad1: Last month felt nervous/anxious/on edge.

258 notes sr_anx_gad2: deprsan4

259 notes sr_anx_gad2: Last month how often been unable to stop/control worrying.

260
261 notes sr_phq2_score: deprsan1 deprsan2

```
262 notes sr_phq2_score: sr_depr_pqq1 plus sr_depr_pqq2, measuring depression

263 notes sr_phq2_depressed: deprsan1 deprsan2

264 notes sr_phq2_depressed: sr_phq2_score >=3, depression indicator

265
266 notes sr_gad2_score: sr_anx_gad1 sr_anx_gad2

267 notes sr_gad2_score: sr_anx_gad1 plus sr_anx_gad2, measuring anxiety

268 notes sr_gad2_anxiety: sr_anx_gad1 sr_anx_gad2

269 notes sr_gad2_anxiety: sr_gad2_score >=3, anxiety indicator

270
271 foreach x in sr_depr_pqq1 sr_depr_pqq2 sr_anx_gad1 sr_anx_gad2 sr_phq2_score /
  > //
  > sr_phq2_depressed sr_gad2_score sr_gad2_anxiety{
    2. notes `x': Located in NHATS Setup, under Part 4.
    3. notes `x': Updated: 04/15/19-MH
    4. }

272
273 *************************************************
274 //Dementia, based on NHATS technical paper no. 5, expanded for 3 waves
275 //separate variables for proxy vs self interviews
276 *************************************************
277 tab proxy_ivw ivw_type, missing

  Interview |             ivw_type
  via proxy | Alive, SP  Died, pro  SP interv |    Total
 -----------+---------------------------------+----------
          0 |    39,211          0          0 |   39,211
          1 |     2,927      2,671          0 |    5,598
          . |         0          0      2,969 |    2,969
 -----------+---------------------------------+----------
      Total |    42,138      2,671      2,969 |   47,778


278
279 //Initialize 3 category dementia variable
280 //probable dementia, possible dementia, no dementia
281 //probable = diagnosis reported or 2+ ad8 questions (proxy) or <1.5 SD below m
  > ean
282 gen dem_3_cat=-1 if ivw_type!=1 //set to na if not SP interview
  (42,138 missing values generated)

283 replace dem_3_cat=1 if sr_dementia_ever==1 //if reported directly
  (3,316 real changes made)

284
285 //for proxy interviews, use ad8 score
286 forvalues i = 1/8{
    2. gen pr_ad8_`i'=-1 //initialize to n/a
    3. replace pr_ad8_`i'=. if proxy_ivw==1 & dem_3_cat==. //set missing if proxy
  > ivw w/o direct report dementia
    4. forvalues w=1/$w{
    5.         replace pr_ad8_`i'=1 if inlist(chgthink`i',1,3) & wave==`w' & dem_3
  > _cat==. & proxy_ivw==1 //yes or dementia reported
    6.         replace pr_ad8_`i'=0 if inlist(chgthink`i',2,-8) & wave==`w' & dem_
  > 3_cat==. &  proxy_ivw==1 //no or don't know
    7.         }
    8. tab pr_ad8_`i' wave, missing
    9. tab pr_ad8_`i' wave if proxy_ivw==1, missing
   10. }
  (1,207 real changes made, 1,207 to missing)
  (108 real changes made)
  (206 real changes made)
  (73 real changes made)
  (148 real changes made)
  (50 real changes made)
```

(101 real changes made)
(42 real changes made)
(63 real changes made)
(62 real changes made)
(111 real changes made)
(50 real changes made)
(89 real changes made)
(28 real changes made)
(47 real changes made)

```
          |                          Survey wave
  pr_ad8_1 |        1          2          3          4          5 |     Total
-----------+-------------------------------------------------------+----------
       -1 |    7,931      6,851      5,644      4,625      8,157 |    46,571
        0 |      206        148        101         63        111 |       765
        1 |      108         73         50         42         62 |       413
        . |        0          3          4          7          4 |        29
-----------+-------------------------------------------------------+----------
    Total |    8,245      7,075      5,799      4,737      8,334 |    47,778


          |     Survey wave
  pr_ad8_1 |        6          7 |     Total
-----------+---------------------+----------
       -1 |    7,132      6,231 |    46,571
        0 |       89         47 |       765
        1 |       50         28 |       413
        . |        5          6 |        29
-----------+---------------------+----------
    Total |    7,276      6,312 |    47,778


          |                          Survey wave
  pr_ad8_1 |        1          2          3          4          5 |     Total
-----------+-------------------------------------------------------+----------
       -1 |      269        740        742        610        602 |     4,391
        0 |      206        148        101         63        111 |       765
        1 |      108         73         50         42         62 |       413
        . |        0          3          4          7          4 |        29
-----------+-------------------------------------------------------+----------
    Total |      583        964        897        722        779 |     5,598


          |     Survey wave
  pr_ad8_1 |        6          7 |     Total
-----------+---------------------+----------
       -1 |      750        678 |     4,391
        0 |       89         47 |       765
        1 |       50         28 |       413
        . |        5          6 |        29
-----------+---------------------+----------
    Total |      894        759 |     5,598
```

(1,207 real changes made, 1,207 to missing)
(124 real changes made)
(190 real changes made)
(86 real changes made)
(135 real changes made)
(62 real changes made)
(89 real changes made)
(44 real changes made)
(61 real changes made)
(73 real changes made)
(99 real changes made)
(67 real changes made)
(72 real changes made)
(31 real changes made)
(44 real changes made)

```
           |                          Survey wave
 pr_ad8_2 |         1          2          3          4          5 |     Total
-----------+-------------------------------------------------------+----------
       -1 |     7,931      6,851      5,644      4,625      8,157 |    46,571
        0 |       190        135         89         61         99 |       690
        1 |       124         86         62         44         73 |       487
        . |         0          3          4          7          5 |        30
-----------+-------------------------------------------------------+----------
    Total |     8,245      7,075      5,799      4,737      8,334 |    47,778


           |      Survey wave
 pr_ad8_2 |         6          7 |     Total
-----------+----------------------+----------
       -1 |     7,132      6,231 |    46,571
        0 |        72         44 |       690
        1 |        67         31 |       487
        . |         5          6 |        30
-----------+----------------------+----------
    Total |     7,276      6,312 |    47,778


           |                          Survey wave
 pr_ad8_2 |         1          2          3          4          5 |     Total
-----------+-------------------------------------------------------+----------
       -1 |       269        740        742        610        602 |     4,391
        0 |       190        135         89         61         99 |       690
        1 |       124         86         62         44         73 |       487
        . |         0          3          4          7          5 |        30
-----------+-------------------------------------------------------+----------
    Total |       583        964        897        722        779 |     5,598


           |      Survey wave
 pr_ad8_2 |         6          7 |     Total
-----------+----------------------+----------
       -1 |       750        678 |     4,391
        0 |        72         44 |       690
        1 |        67         31 |       487
        . |         5          6 |        30
-----------+----------------------+----------
    Total |       894        759 |     5,598
```

(1,207 real changes made, 1,207 to missing)
(133 real changes made)
(181 real changes made)
(88 real changes made)
(133 real changes made)
(62 real changes made)
(89 real changes made)
(46 real changes made)
(59 real changes made)
(74 real changes made)
(98 real changes made)
(54 real changes made)
(85 real changes made)
(30 real changes made)
(45 real changes made)

```
           |                          Survey wave
 pr_ad8_3 |         1          2          3          4          5 |     Total
-----------+-------------------------------------------------------+----------
       -1 |     7,931      6,851      5,644      4,625      8,157 |    46,571
        0 |       181        133         89         59         98 |       690
        1 |       133         88         62         46         74 |       487
        . |         0          3          4          7          5 |        30
-----------+-------------------------------------------------------+----------
    Total |     8,245      7,075      5,799      4,737      8,334 |    47,778
```

```
          |       Survey wave
  pr_ad8_3 |      6          7 |     Total
-----------+--------------------+----------
       -1 |   7,132      6,231 |    46,571
        0 |      85         45 |       690
        1 |      54         30 |       487
        . |       5          6 |        30
-----------+--------------------+----------
    Total |   7,276      6,312 |    47,778
```

```
          |                   Survey wave
  pr_ad8_3 |      1          2          3          4          5 |     Total
-----------+-------------------------------------------------------+----------
       -1 |    269        740        742        610        602 |     4,391
        0 |    181        133         89         59         98 |       690
        1 |    133         88         62         46         74 |       487
        . |      0          3          4          7          5 |        30
-----------+-------------------------------------------------------+----------
    Total |    583        964        897        722        779 |     5,598
```

```
          |       Survey wave
  pr_ad8_3 |      6          7 |     Total
-----------+--------------------+----------
       -1 |    750        678 |     4,391
        0 |     85         45 |       690
        1 |     54         30 |       487
        . |      5          6 |        30
-----------+--------------------+----------
    Total |    894        759 |     5,598
```

(1,207 real changes made, 1,207 to missing)
(97 real changes made)
(217 real changes made)
(81 real changes made)
(140 real changes made)
(59 real changes made)
(92 real changes made)
(44 real changes made)
(61 real changes made)
(72 real changes made)
(100 real changes made)
(50 real changes made)
(89 real changes made)
(24 real changes made)
(51 real changes made)

```
          |                   Survey wave
  pr_ad8_4 |      1          2          3          4          5 |     Total
-----------+-------------------------------------------------------+----------
       -1 |   7,931      6,851      5,644      4,625      8,157 |    46,571
        0 |    217        140         92         61        100 |       750
        1 |     97         81         59         44         72 |       427
        . |      0          3          4          7          5 |        30
-----------+-------------------------------------------------------+----------
    Total |   8,245      7,075      5,799      4,737      8,334 |    47,778
```

```
          |       Survey wave
  pr_ad8_4 |      6          7 |     Total
-----------+--------------------+----------
       -1 |   7,132      6,231 |    46,571
        0 |     89         51 |       750
        1 |     50         24 |       427
        . |      5          6 |        30
-----------+--------------------+----------
    Total |   7,276      6,312 |    47,778
```

```
            |                        Survey wave
  pr_ad8_4  |        1          2          3          4          5  |     Total
------------+-------------------------------------------------------+----------
        -1  |      269        740        742        610        602  |     4,391
         0  |      217        140         92         61        100  |       750
         1  |       97         81         59         44         72  |       427
         .  |        0          3          4          7          5  |        30
------------+-------------------------------------------------------+----------
     Total  |      583        964        897        722        779  |     5,598


            |     Survey wave
  pr_ad8_4  |        6          7  |     Total
------------+---------------------+----------
        -1  |      750        678  |     4,391
         0  |       89         51  |       750
         1  |       50         24  |       427
         .  |        5          6  |        30
------------+---------------------+----------
     Total  |      894        759  |     5,598
```

(1,207 real changes made, 1,207 to missing)
(104 real changes made)
(210 real changes made)
(83 real changes made)
(138 real changes made)
(43 real changes made)
(108 real changes made)
(37 real changes made)
(68 real changes made)
(64 real changes made)
(108 real changes made)
(51 real changes made)
(88 real changes made)
(28 real changes made)
(47 real changes made)

```
            |                        Survey wave
  pr_ad8_5  |        1          2          3          4          5  |     Total
------------+-------------------------------------------------------+----------
        -1  |    7,931      6,851      5,644      4,625      8,157  |    46,571
         0  |      210        138        108         68        108  |       767
         1  |      104         83         43         37         64  |       410
         .  |        0          3          4          7          5  |        30
------------+-------------------------------------------------------+----------
     Total  |    8,245      7,075      5,799      4,737      8,334  |    47,778


            |     Survey wave
  pr_ad8_5  |        6          7  |     Total
------------+---------------------+----------
        -1  |    7,132      6,231  |    46,571
         0  |       88         47  |       767
         1  |       51         28  |       410
         .  |        5          6  |        30
------------+---------------------+----------
     Total  |    7,276      6,312  |    47,778


            |                        Survey wave
  pr_ad8_5  |        1          2          3          4          5  |     Total
------------+-------------------------------------------------------+----------
        -1  |      269        740        742        610        602  |     4,391
         0  |      210        138        108         68        108  |       767
         1  |      104         83         43         37         64  |       410
         .  |        0          3          4          7          5  |        30
------------+-------------------------------------------------------+----------
     Total  |      583        964        897        722        779  |     5,598
```

```
          |      Survey wave
 pr_ad8_5 |       6            7 |     Total
----------+----------------------+----------
       -1 |     750          678 |     4,391
        0 |      88           47 |       767
        1 |      51           28 |       410
        . |       5            6 |        30
----------+----------------------+----------
    Total |     894          759 |     5,598
```

(1,207 real changes made, 1,207 to missing)
(98 real changes made)
(215 real changes made)
(68 real changes made)
(153 real changes made)
(44 real changes made)
(107 real changes made)
(35 real changes made)
(70 real changes made)
(61 real changes made)
(112 real changes made)
(41 real changes made)
(98 real changes made)
(25 real changes made)
(50 real changes made)

```
          |                       Survey wave
 pr_ad8_6 |       1           2           3           4           5 |     Total
----------+-------------------------------------------------------+----------
       -1 |   7,931       6,851       5,644       4,625       8,157 |    46,571
        0 |     215         153         107          70         112 |       805
        1 |      98          68          44          35          61 |       372
        . |       1           3           4           7           4 |        30
----------+-------------------------------------------------------+----------
    Total |   8,245       7,075       5,799       4,737       8,334 |    47,778
```

```
          |      Survey wave
 pr_ad8_6 |       6            7 |     Total
----------+----------------------+----------
       -1 |   7,132        6,231 |    46,571
        0 |      98           50 |       805
        1 |      41           25 |       372
        . |       5            6 |        30
----------+----------------------+----------
    Total |   7,276        6,312 |    47,778
```

```
          |                       Survey wave
 pr_ad8_6 |       1           2           3           4           5 |     Total
----------+-------------------------------------------------------+----------
       -1 |     269         740         742         610         602 |     4,391
        0 |     215         153         107          70         112 |       805
        1 |      98          68          44          35          61 |       372
        . |       1           3           4           7           4 |        30
----------+-------------------------------------------------------+----------
    Total |     583         964         897         722         779 |     5,598
```

```
          |      Survey wave
 pr_ad8_6 |       6            7 |     Total
----------+----------------------+----------
       -1 |     750          678 |     4,391
        0 |      98           50 |       805
        1 |      41           25 |       372
        . |       5            6 |        30
----------+----------------------+----------
    Total |     894          759 |     5,598
```

(1,207 real changes made, 1,207 to missing)
(66 real changes made)
(248 real changes made)
(49 real changes made)
(171 real changes made)
(24 real changes made)
(127 real changes made)
(24 real changes made)
(80 real changes made)
(29 real changes made)
(143 real changes made)
(19 real changes made)
(120 real changes made)
(13 real changes made)
(62 real changes made)

| | Survey wave | | | | | |
pr_ad8_7	1	2	3	4	5	Total
-1	7,931	6,851	5,644	4,625	8,157	46,571
0	248	171	127	80	143	951
1	66	49	24	24	29	224
.	0	4	4	8	5	32
Total	8,245	7,075	5,799	4,737	8,334	47,778

| | Survey wave | | |
pr_ad8_7	6	7	Total
-1	7,132	6,231	46,571
0	120	62	951
1	19	13	224
.	5	6	32
Total	7,276	6,312	47,778

| | Survey wave | | | | | |
pr_ad8_7	1	2	3	4	5	Total
-1	269	740	742	610	602	4,391
0	248	171	127	80	143	951
1	66	49	24	24	29	224
.	0	4	4	8	5	32
Total	583	964	897	722	779	5,598

| | Survey wave | | |
pr_ad8_7	6	7	Total
-1	750	678	4,391
0	120	62	951
1	19	13	224
.	5	6	32
Total	894	759	5,598

(1,207 real changes made, 1,207 to missing)
(114 real changes made)
(200 real changes made)
(79 real changes made)
(142 real changes made)
(63 real changes made)
(88 real changes made)
(49 real changes made)
(56 real changes made)
(74 real changes made)
(99 real changes made)
(65 real changes made)
(74 real changes made)

```
(35 real changes made)
(40 real changes made)
```

pr_ad8_8	Survey wave					Total
	1	2	3	4	5	
-1	7,931	6,851	5,644	4,625	8,157	46,571
0	200	142	88	56	99	699
1	114	79	63	49	74	479
.	0	3	4	7	4	29
Total	8,245	7,075	5,799	4,737	8,334	47,778

pr_ad8_8	Survey wave		Total
	6	7	
-1	7,132	6,231	46,571
0	74	40	699
1	65	35	479
.	5	6	29
Total	7,276	6,312	47,778

pr_ad8_8	Survey wave					Total
	1	2	3	4	5	
-1	269	740	742	610	602	4,391
0	200	142	88	56	99	699
1	114	79	63	49	74	479
.	0	3	4	7	4	29
Total	583	964	897	722	779	5,598

pr_ad8_8	Survey wave		Total
	6	7	
-1	750	678	4,391
0	74	40	699
1	65	35	479
.	5	6	29
Total	894	759	5,598

```
287
288 tab pr_ad8_3 chgthink3 if wave==1, missing
```

pr_ad8_3	R1 CP3C SP DIFF REMEMBER APPT					Total
	-9 Missin	-8 DK	-1 Inappl	1 YES, A	2 NO, NO	
-1	168	2	7,494	126	25	7,931
0	0	4	0	0	177	181
1	0	0	0	129	0	133
Total	168	6	7,494	255	202	8,245

pr_ad8_3	R1 CP3C SP DIFF REMEMBER APPT 3 DEMENT	Total
-1	116	7,931
0	0	181
1	4	133
Total	120	8,245

```
289 tab chgthink1 dad8dem if wave==2 & proxy_ivw==1, missing //previous proxy ivw
  > ad8 items indicated dementia

                     |     R2 D DEMENTIA
     R1 CP3A SP DIFF | REPORTED IN PRIOR AD8
       REMEMBER DATE | -1 Inappl  1 DEMENTI |     Total
    -----------------+----------------------+----------
               -8 DK |         1          0 |         1
      -1 Inapplicable |       463        120 |       583
       1 YES, A CHANGE |      135          0 |       135
       2 NO, NO CHANGE |      179          0 |       179
    3 DEMENTIA/ALZHEIMER |     66          0 |        66
    -----------------+----------------------+----------
               Total |       844        120 |       964


290
291 tab pr_ad8_1 wave, missing

              |                         Survey wave
     pr_ad8_1 |         1          2          3          4          5 |     Total
    ----------+-------------------------------------------------------+----------
           -1 |     7,931      6,851      5,644      4,625      8,157 |    46,571
            0 |       206        148        101         63        111 |       765
            1 |       108         73         50         42         62 |       413
            . |         0          3          4          7          4 |        29
    ----------+-------------------------------------------------------+----------
        Total |     8,245      7,075      5,799      4,737      8,334 |    47,778


              |     Survey wave
     pr_ad8_1 |         6          7 |     Total
    ----------+----------------------+----------
           -1 |     7,132      6,231 |    46,571
            0 |        89         47 |       765
            1 |        50         28 |       413
            . |         5          6 |        29
    ----------+----------------------+----------
        Total |     7,276      6,312 |    47,778


292 tab pr_ad8_1 dad8dem if wave==2 & proxy_ivw==1, missing //previous proxy ivw a
  > d8 items indicated dementia

              |     R2 D DEMENTIA
              | REPORTED IN PRIOR AD8
     pr_ad8_1 | -1 Inappl  1 DEMENTI |     Total
    ----------+----------------------+----------
           -1 |       623        117 |       740
            0 |       148          0 |       148
            1 |        73          0 |        73
            . |         0          3 |         3
    ----------+----------------------+----------
        Total |       844        120 |       964


293 tab pr_ad8_1 sr_dementia_ever if wave==2 & proxy_ivw==1, missing // reported d
  > ementia directly

              |         Self report Dementia
     pr_ad8_1 |        -8          0          1          . |     Total
    ----------+---------------------------------------------+----------
           -1 |         0          0        237        503 |       740
            0 |         0        148          0          0 |       148
            1 |         1         72          0          0 |        73
            . |         0          3          0          0 |         3
    ----------+---------------------------------------------+----------
        Total |         1        223        237        503 |       964
```

```
294
295 gen pr_ad8_score=(pr_ad8_1+pr_ad8_2+pr_ad8_3+pr_ad8_4+pr_ad8_5+pr_ad8_6+pr_ad8
 > _7+pr_ad8_8) if proxy_ivw==1 & dem_3_cat==.
 (46,605 missing values generated)

296 tab pr_ad8_score proxy_ivw, missing
```

pr_ad8_sco re	Interview via proxy 0	1	.	Total
0	0	364	0	364
1	0	166	0	166
2	0	113	0	113
3	0	94	0	94
4	0	90	0	90
5	0	94	0	94
6	0	78	0	78
7	0	78	0	78
8	0	96	0	96
.	39,211	4,425	2,969	46,605
Total	39,211	5,598	2,969	47,778

```
297 tab pr_ad8_score wave, missing
```

pr_ad8_sco re	Survey wave 1	2	3	4	5	Total
0	103	76	43	31	47	364
1	51	31	29	11	22	166
2	25	19	11	13	17	113
3	18	14	15	6	21	94
4	22	16	14	9	11	90
5	27	19	10	8	15	94
6	25	8	10	6	14	78
7	21	14	7	6	10	78
8	21	23	12	14	14	96
.	7,932	6,855	5,648	4,633	8,163	46,605
Total	8,245	7,075	5,799	4,737	8,334	47,778

pr_ad8_sco re	Survey wave 6	7	Total
0	42	22	364
1	12	10	166
2	20	8	113
3	12	8	94
4	13	5	90
5	10	5	94
6	11	4	78
7	11	9	78
8	8	4	96
.	7,137	6,237	46,605
Total	7,276	6,312	47,778

```
298
299 gen dem_via_proxy=1 if pr_ad8_score>=2 & pr_ad8_score~=. //from ad8 score dire
  > ctly
  (47,135 missing values generated)

300 replace dem_via_proxy=0 if inlist(pr_ad8_score,0,1)
  (530 real changes made)

301 replace dem_via_proxy=1 if (dad8dem==1 | dad8dem==1) & proxy_ivw==1 //if previ
  > ous interview ad8 indicated dementia
  (579 real changes made)

302 replace dem_via_proxy=-1 if sr_dementia_ever==1
  (3,316 real changes made)

303 tab dem_via_proxy wave if proxy_ivw==1 & ivw_type==1, missing
```

dem_via_pr oxy	Survey wave					Total
	1	2	3	4	5	
-1	269	237	219	206	306	1,720
0	154	107	72	42	69	530
1	159	116	83	65	103	662
.	1	1	0	5	5	15
Total	583	461	374	318	483	2,927

dem_via_pr oxy	Survey wave		Total
	6	7	
-1	264	219	1,720
0	54	32	530
1	88	48	662
.	2	1	15
Total	408	300	2,927

```
304
305 //set 3 category dementia state variable
306 //first xwave variable for proxy allowed sp to answer cg section
307 /*2/14/19 Speaktosp already exists since removing prefixes.
  > gen speaktosp=.
  > forvalues w=1/$w{
  >         replace speaktosp=cg`w'speaktosp if wave==`w'
  > }*/
308
309 replace dem_3_cat=1 if dem_3_cat==. & dem_via_proxy==1 //if proxy ivw indicate
  > s dem
  (662 real changes made)

310 replace dem_3_cat=3 if dem_3_cat==. & dem_via_proxy==0 & speaktosp==2  //proxy
  >  ind no dem
  (262 real changes made)

311 tab dem_3_cat wave, missing
```

dem_3_cat	Survey wave					Total
	1	2	3	4	5	
-1	636	1,019	915	700	758	5,640
1	616	557	506	443	674	3,978
3	76	57	31	20	35	262
.	6,917	5,442	4,347	3,574	6,867	37,898
Total	8,245	7,075	5,799	4,737	8,334	47,778

```
              |        Survey wave
    dem_3_cat |         6          7 |      Total
    ----------+----------------------+----------
           -1 |       866        746 |      5,640
            1 |       628        554 |      3,978
            3 |        29         14 |        262
            . |     5,753      4,998 |     37,898
    ----------+----------------------+----------
        Total |     7,276      6,312 |     47,778
```

312
313
314 notes dem_3_cat: sr_dementia_ever dem_via_proxy speaptosp

315 notes dem_3_cat: 3 Category dementia

316
317 forvalues i=1/8{
    2. notes pr_ad8_`i': chgthink`i'
    3. }

318 notes pr_ad8_1: Change caused by memeory problems remembering month or year. (
  > from proxy)

319 notes pr_ad8_2: Change caused by memeory problems repeating questions, stories
  > , statements. (from proxy)

320 notes pr_ad8_3: Change caused by memeory problems amount of difficulty remembe
  > ring appointments. (from proxy)

321 notes pr_ad8_4: Change caused by memeory problems amount of interest in hobbie
  > s/activities. (from proxy)

322 notes pr_ad8_5: Change caused by memeory problems handling money matters. (fro
  > m proxy)

323 notes pr_ad8_6: Change caused by memeory problems trouble to use tools/gadgets
  > /tv. (from proxy)

324 notes pr_ad8_7: Change caused by memeory problems, problems with judgement. (f
  > rom proxy)

325 notes pr_ad8_8: Change caused by memeory problems, faily problems with thinkin
  > g or memeory. (from proxy)

326
327
328 notes pr_ad8_score: chgthink*

329 notes pr_ad8_score: adding up pr_ad8_* (from proxy)

330
331 notes dem_via_proxy: chgthink* pr_ad8_* pr_ad8_score

332 notes dem_via_proxy: Dementia indicator from proxy.

333
334 foreach x in dem_3_cat pr_ad8_1 pr_ad8_2 pr_ad8_3 pr_ad8_4 pr_ad8_5 pr_ad8_6 /
  > //
  > pr_ad8_7 pr_ad8_8 pr_ad8_score dem_via_proxy{
    2.
```

```
335 notes `x': Located in NHATS Setup, under Part 4.
    3. notes `x': Updated: 04/15/19-MH
    4. }

336
337 **************************************************
338 //for self interviews
339 **************************************************
340 //current date questions
341 tab todaydat1 speaktosp if wave==1 & ivw_type==1, missing

   R1 CG6A TODAY'S | R1 CG1A MAY SPEAK TO SP ASK QUES
   DATE CORRCT MNTH | -1 Inappl      1 YES       2 NO |     Total
   -----------------+--------------------------------+----------
              -7 RF |        3          2          0 |         5
    -1 Inapplicable |        0          6        284 |       290
             1 YES |    6,523        140          0 |     6,663
    2 NO/DON'T KNOW |      500        151          0 |       651
   -----------------+--------------------------------+----------
             Total |    7,026        299        284 |     7,609


342
343 forvalues i = 1/4{
    2.          gen date_item`i'=.
    3.          forvalues w=1/$w{
    4.                  replace date_item`i'=1 if todaydat`i'==1 & wave==`w' //yes
    5.                  replace date_item`i'=0 if inlist(todaydat`i',2,-7) & wave==
  > `w' //no, dont know, refused
    6.          }
    7. }
 (47,778 missing values generated)
 (6,663 real changes made)
 (656 real changes made)
 (5,305 real changes made)
 (499 real changes made)
 (4,277 real changes made)
 (409 real changes made)
 (3,495 real changes made)
 (359 real changes made)
 (6,715 real changes made)
 (618 real changes made)
 (5,711 real changes made)
 (472 real changes made)
 (4,970 real changes made)
 (421 real changes made)
 (47,778 missing values generated)
 (5,845 real changes made)
 (1,474 real changes made)
 (4,261 real changes made)
 (1,543 real changes made)
 (3,336 real changes made)
 (1,350 real changes made)
 (2,744 real changes made)
 (1,110 real changes made)
 (5,585 real changes made)
 (1,748 real changes made)
 (4,506 real changes made)
 (1,677 real changes made)
 (3,939 real changes made)
 (1,452 real changes made)
 (47,778 missing values generated)
 (6,620 real changes made)
 (699 real changes made)
 (5,302 real changes made)
 (502 real changes made)
 (4,266 real changes made)
 (420 real changes made)
 (3,500 real changes made)
 (354 real changes made)
 (6,673 real changes made)
 (660 real changes made)
```

```
   (5,668 real changes made)
   (515 real changes made)
   (4,930 real changes made)
   (461 real changes made)
   (47,778 missing values generated)
   (6,583 real changes made)
   (736 real changes made)
   (5,357 real changes made)
   (447 real changes made)
   (4,325 real changes made)
   (361 real changes made)
   (82 real changes made)
   (3,772 real changes made)
   (6,774 real changes made)
   (559 real changes made)
   (5,760 real changes made)
   (423 real changes made)
   (4,991 real changes made)
   (400 real changes made)

344 //count date questions correct
345 gen date_sum=date_item1+date_item2+date_item3+date_item4
   (7,208 missing values generated)

346 tab date_sum wave, missing

            |                         Survey wave
   date_sum |         1          2          3          4          5 |     Total
   ---------+-------------------------------------------------------+----------
          0 |       317        202        179        200        268 |     1,534
          1 |       213        158        138        185        203 |     1,205
          2 |       293        294        196        825        305 |     2,389
          3 |     1,072      1,121      1,018      2,590      1,294 |     9,568
          4 |     5,424      4,029      3,155         54      5,263 |    25,874
          . |       926      1,271      1,113        883      1,001 |     7,208
   ---------+-------------------------------------------------------+----------
      Total |     8,245      7,075      5,799      4,737      8,334 |    47,778


            |   Survey wave
   date_sum |         6          7 |     Total
   ---------+----------------------+----------
          0 |       186        182 |     1,534
          1 |       174        134 |     1,205
          2 |       246        230 |     2,389
          3 |     1,329      1,144 |     9,568
          4 |     4,248      3,701 |    25,874
          . |     1,093        921 |     7,208
   ---------+----------------------+----------
      Total |     7,276      6,312 |    47,778


347
348 local i=1

349 foreach x in Month Day Year "Day of Week"{
  2. notes date_item`i': todaydat`i'
  3. notes date_item`i': Did SP say correct `x'
  4. notes date_item`i': Located in NHATS Setup, under Part 4.
  5. notes date_item`i': Updated: 04/16/19-MH
  6. local i=`i'+1
  7. }
```

```
350
351 notes date_sum: todaydat1 todaydat2 todaydat3 todaydat4

352 notes date_sum: Count of date_item1-date_item4

353 notes date_sum: Located in NHATS Setup, under Part 4.

354 notes date_sum: Updated: 04/16/19-MH

355
356
357 //add categories for proxy says can't speak to sp or proxy says can speak but
  > sp unble to answer
358 forvalues w=1/$w{
  2.          replace date_sum=-2 if date_sum==. & speaktosp==2 & wave==`w'
  3.          replace date_sum=-3 if (date_item1==. | date_item2==. | date_item3=
  > =. | ///
  >                date_item4==. ) & speaktosp==1 & wave==`w'
  4. }
(284 real changes made)
(6 real changes made)
(250 real changes made)
(2 real changes made)
(197 real changes made)
(1 real change made)
(182 real changes made)
(1 real change made)
(237 real changes made)
(6 real changes made)
(220 real changes made)
(7 real changes made)
(170 real changes made)
(5 real changes made)

359 tab date_sum wave, missing
```

			Survey wave			
date_sum	1	2	3	4	5	Total
-3	6	2	1	1	6	28
-2	284	250	197	182	237	1,540
0	317	202	179	200	268	1,534
1	213	158	138	185	203	1,205
2	293	294	196	825	305	2,389
3	1,072	1,121	1,018	2,590	1,294	9,568
4	5,424	4,029	3,155	54	5,263	25,874
.	636	1,019	915	700	758	5,640
Total	8,245	7,075	5,799	4,737	8,334	47,778

	Survey wave		
date_sum	6	7	Total
-3	7	5	28
-2	220	170	1,540
0	186	182	1,534
1	174	134	1,205
2	246	230	2,389
3	1,329	1,144	9,568
4	4,248	3,701	25,874
.	866	746	5,640
Total	7,276	6,312	47,778

```
360
361 //new version date sum measure, without the extra categories
362 gen date_sumr=date_sum
  (5,640 missing values generated)

363 replace date_sumr=. if date_sum==-2
  (1,540 real changes made, 1,540 to missing)

364 replace date_sumr=0 if date_sum==-3
  (28 real changes made)

365
366 //president/vp items and count
367 capture program drop president

368 program define president
  1.          args newv oldv
  2.          gen `newv'=.
  3.          forvalues w=1/$w{
  4.                  replace `newv'=1 if `oldv'==1  & wave==`w' //yes
  5.                  replace `newv'=0 if inlist(`oldv',2,-7) & wave==`w' //no, r
  > efused
  6.          }
  7.          tab `newv' wave, missing
  8. end

369
370 president preslast presidna1
  (47,778 missing values generated)
  (6,672 real changes made)
  (532 real changes made)
  (5,395 real changes made)
  (329 real changes made)
  (4,331 real changes made)
  (281 real changes made)
  (3,594 real changes made)
  (188 real changes made)
  (6,802 real changes made)
  (415 real changes made)
  (5,786 real changes made)
  (321 real changes made)
  (4,878 real changes made)
  (444 real changes made)
```

| | Survey wave | | | | | |
preslast	1	2	3	4	5	Total
0	532	329	281	188	415	2,510
1	6,672	5,395	4,331	3,594	6,802	37,458
.	1,041	1,351	1,187	955	1,117	7,810
Total	8,245	7,075	5,799	4,737	8,334	47,778

| | Survey wave | | |
preslast	6	7	Total
0	321	444	2,510
1	5,786	4,878	37,458
.	1,169	990	7,810
Total	7,276	6,312	47,778

371 president presfirst presidna3
   (47,778 missing values generated)
   (3,943 real changes made)
   (3,261 real changes made)
   (3,689 real changes made)
   (2,035 real changes made)
   (3,086 real changes made)
   (1,526 real changes made)
   (2,640 real changes made)
   (1,142 real changes made)
   (4,841 real changes made)
   (2,376 real changes made)
   (4,304 real changes made)
   (1,803 real changes made)
   (4,324 real changes made)
   (998 real changes made)

presfirst	Survey wave 1	2	3	4	5	Total
0	3,261	2,035	1,526	1,142	2,376	13,141
1	3,943	3,689	3,086	2,640	4,841	26,827
.	1,041	1,351	1,187	955	1,117	7,810
Total	8,245	7,075	5,799	4,737	8,334	47,778

presfirst	Survey wave 6	7	Total
0	1,803	998	13,141
1	4,304	4,324	26,827
.	1,169	990	7,810
Total	7,276	6,312	47,778

372 president vplast vpname1
   (47,778 missing values generated)
   (3,387 real changes made)
   (3,817 real changes made)
   (3,202 real changes made)
   (2,522 real changes made)
   (2,710 real changes made)
   (1,902 real changes made)
   (2,286 real changes made)
   (1,496 real changes made)
   (4,680 real changes made)
   (2,537 real changes made)
   (3,974 real changes made)
   (2,133 real changes made)
   (3,053 real changes made)
   (2,269 real changes made)

vplast	Survey wave 1	2	3	4	5	Total
0	3,817	2,522	1,902	1,496	2,537	16,676
1	3,387	3,202	2,710	2,286	4,680	23,292
.	1,041	1,351	1,187	955	1,117	7,810
Total	8,245	7,075	5,799	4,737	8,334	47,778

```
            |       Survey wave
    vplast |       6          7 |     Total
-----------+--------------------+----------
         0 |    2,133      2,269 |    16,676
         1 |    3,974      3,053 |    23,292
         . |    1,169        990 |     7,810
-----------+--------------------+----------
     Total |    7,276      6,312 |    47,778
```

373 president vpfirst vpname3
  (47,778 missing values generated)
  (2,587 real changes made)
  (4,617 real changes made)
  (2,589 real changes made)
  (3,135 real changes made)
  (2,259 real changes made)
  (2,353 real changes made)
  (1,932 real changes made)
  (1,850 real changes made)
  (3,902 real changes made)
  (3,315 real changes made)
  (3,451 real changes made)
  (2,656 real changes made)
  (1,438 real changes made)
  (3,884 real changes made)

```
            |                      Survey wave
   vpfirst |        1          2          3          4          5 |     Total
-----------+-------------------------------------------------------+----------
         0 |    4,617      3,135      2,353      1,850      3,315 |    21,810
         1 |    2,587      2,589      2,259      1,932      3,902 |    18,158
         . |    1,041      1,351      1,187        955      1,117 |     7,810
-----------+-------------------------------------------------------+----------
     Total |    8,245      7,075      5,799      4,737      8,334 |    47,778
```

```
            |       Survey wave
   vpfirst |       6          7 |     Total
-----------+--------------------+----------
         0 |    2,656      3,884 |    21,810
         1 |    3,451      1,438 |    18,158
         . |    1,169        990 |     7,810
-----------+--------------------+----------
     Total |    7,276      6,312 |    47,778
```

374
375 //count president questions correct
376 gen presvp=preslast+presfirst+vplast+vpfirst
  (7,810 missing values generated)

377 tab presvp wave, missing

```
            |                      Survey wave
    presvp |        1          2          3          4          5 |     Total
-----------+-------------------------------------------------------+----------
         0 |      459        295        245        170        361 |     2,214
         1 |    1,940      1,184        805        638      1,100 |     6,991
         2 |    1,807      1,241      1,028        797      1,441 |     9,047
         3 |      957        807        611        488      1,017 |     6,214
         4 |    2,041      2,197      1,923      1,689      3,298 |    15,502
         . |    1,041      1,351      1,187        955      1,117 |     7,810
-----------+-------------------------------------------------------+----------
     Total |    8,245      7,075      5,799      4,737      8,334 |    47,778
```

```
            |      Survey wave
     presvp |         6          7 |     Total
------------+----------------------+----------
          0 |       279        405 |     2,214
          1 |       880        444 |     6,991
          2 |     1,190      1,543 |     9,047
          3 |       777      1,557 |     6,214
          4 |     2,981      1,373 |    15,502
          . |     1,169        990 |     7,810
------------+----------------------+----------
      Total |     7,276      6,312 |    47,778
```

378
379
380
381 //add categories for proxy says can't speak to sp or proxy says can speak but
  > sp unble to answer
382 forvalues w=1/$w{
  2.   replace presvp=-2 if presvp==. & speaktosp==2 & wave==`w'
  3.   replace presvp=-3 if presvp==. & (preslast==. | presfirst==. | vpla
  > st==. | ///
  >   vpfirst==.) & speaktosp==1 & wave==`w'
  4. }
(284 real changes made)
(121 real changes made)
(250 real changes made)
(82 real changes made)
(197 real changes made)
(75 real changes made)
(182 real changes made)
(73 real changes made)
(237 real changes made)
(122 real changes made)
(220 real changes made)
(83 real changes made)
(170 real changes made)
(74 real changes made)

383 tab presvp wave, missing

```
            |                          Survey wave
     presvp |         1          2          3          4          5 |     Total
------------+-------------------------------------------------------+----------
         -3 |       121         82         75         73        122 |       630
         -2 |       284        250        197        182        237 |     1,540
          0 |       459        295        245        170        361 |     2,214
          1 |     1,940      1,184        805        638      1,100 |     6,991
          2 |     1,807      1,241      1,028        797      1,441 |     9,047
          3 |       957        807        611        488      1,017 |     6,214
          4 |     2,041      2,197      1,923      1,689      3,298 |    15,502
          . |       636      1,019        915        700        758 |     5,640
------------+-------------------------------------------------------+----------
      Total |     8,245      7,075      5,799      4,737      8,334 |    47,778
```

```
            |      Survey wave
     presvp |         6          7 |     Total
------------+----------------------+----------
         -3 |        83         74 |       630
         -2 |       220        170 |     1,540
          0 |       279        405 |     2,214
          1 |       880        444 |     6,991
          2 |     1,190      1,543 |     9,047
          3 |       777      1,557 |     6,214
          4 |     2,981      1,373 |    15,502
          . |       866        746 |     5,640
------------+----------------------+----------
      Total |     7,276      6,312 |    47,778
```

```
384
385 //new version president sum measure, without the extra categories
386 gen presvpr=presvp
  (5,640 missing values generated)

387 replace presvpr=. if presvp==-2
  (1,540 real changes made, 1,540 to missing)

388 replace presvpr=0 if presvp==-3
  (630 real changes made)

389
390 //total orientation domain, date and president questions
391 gen date_prvp=date_sumr+presvpr
  (7,180 missing values generated)

392 tab date_prvp, missing

    date_prvp |     Freq.     Percent      Cum.
  ------------+---------------------------------
            0 |     1,162        2.43      2.43
            1 |       670        1.40      3.83
            2 |       878        1.84      5.67
            3 |     1,402        2.93      8.61
            4 |     3,068        6.42     15.03
            5 |     6,368       13.33     28.36
            6 |     7,726       16.17     44.53
            7 |     7,774       16.27     60.80
            8 |    11,550       24.17     84.97
            . |     7,180       15.03    100.00
  ------------+---------------------------------
        Total |    47,778      100.00

393
394 //executive function domain, clock drawing score
395 gen clock_scorer=.
  (47,778 missing values generated)

396 forvalues w=1/$w{
  2.          replace clock_scorer=dclkdraw if wave==`w'
  3.          replace clock_scorer=. if inlist(dclkdraw,-2,-9) & wave==`w' //miss
  > ing
  4.          replace clock_scorer=0 if inlist(dclkdraw,-3,-4,-7) & wave==`w' //r
  > efused,unable
  5. //assign mean values where missing response
397           replace clock_scorer=2 if dclkdraw==-9 & speaktosp==1 & wave==`w' //pr
  > oxy
  6.          replace clock_scorer=3 if dclkdraw==-9 & speaktosp==-1 & wave==`w'
  > //self
  7.          }
  (8,245 real changes made)
  (347 real changes made, 347 to missing)
  (344 real changes made)
  (4 real changes made)
  (59 real changes made)
  (7,075 real changes made)
  (357 real changes made, 357 to missing)
  (195 real changes made)
  (81 real changes made)
  (26 real changes made)
  (5,799 real changes made)
  (278 real changes made, 278 to missing)
  (147 real changes made)
  (72 real changes made)
  (9 real changes made)
  (4,737 real changes made)
  (256 real changes made, 256 to missing)
  (110 real changes made)
  (68 real changes made)
  (6 real changes made)
  (8,334 real changes made)
  (540 real changes made, 540 to missing)
```

```
    (139 real changes made)
    (113 real changes made)
    (11 real changes made)
    (7,276 real changes made)
    (480 real changes made, 480 to missing)
    (110 real changes made)
    (73 real changes made)
    (10 real changes made)
    (6,312 real changes made)
    (399 real changes made, 399 to missing)
    (69 real changes made)
    (69 real changes made)
    (2 real changes made)

398 tab clock_scorer wave, missing //left as -1 if inapplicable
```

clock_scor er	Survey wave					Total
	1	2	3	4	5	
-1	636	1,019	915	700	579	5,126
0	416	250	186	153	204	1,501
1	332	183	128	125	265	1,406
2	950	869	606	447	954	5,152
3	1,991	1,303	1,042	847	1,563	8,999
4	2,673	2,246	1,891	1,160	2,536	14,677
5	963	955	834	1,123	1,817	8,863
.	284	250	197	182	416	2,054
Total	8,245	7,075	5,799	4,737	8,334	47,778

clock_scor er	Survey wave		Total
	6	7	
-1	689	588	5,126
0	170	122	1,501
1	197	176	1,406
2	734	592	5,152
3	1,183	1,070	8,999
4	2,249	1,922	14,677
5	1,657	1,514	8,863
.	397	328	2,054
Total	7,276	6,312	47,778

```
399
400 //memory domain, word recall, uses derived scores, not raw responses
401 capture program drop recall

402 program define recall
  1.          args newv oldv
  2.          gen `newv'=.
  3.          forvalues w=1/$w{
  4.                  replace `newv'=`oldv' if wave==`w'
  5.                  replace `newv'=. if inlist(`oldv',-2,-1) & wave==`w' //n/a
  > or not asked
  6.                  replace `newv'=0 if inlist(`oldv',-7,-3) & wave==`w' //refu
  > sed or unable
  7.          }
  8.          tab `newv' wave, missing
  9. end
```

```
403
404 recall irecall dwrdimmrc
  (47,778 missing values generated)
  (8,245 real changes made)
  (920 real changes made, 920 to missing)
  (261 real changes made)
  (7,075 real changes made)
  (1,269 real changes made, 1,269 to missing)
  (170 real changes made)
  (5,799 real changes made)
  (1,112 real changes made, 1,112 to missing)
  (141 real changes made)
  (4,737 real changes made)
  (882 real changes made, 882 to missing)
  (117 real changes made)
  (8,334 real changes made)
  (995 real changes made, 995 to missing)
  (194 real changes made)
  (7,276 real changes made)
  (1,086 real changes made, 1,086 to missing)
  (142 real changes made)
  (6,312 real changes made)
  (916 real changes made, 916 to missing)
  (117 real changes made)
```

		Survey wave				
irecall	1	2	3	4	5	Total
-9	0	0	0	0	9	9
0	392	261	212	162	283	1,744
1	169	124	101	78	157	892
2	496	344	252	203	444	2,384
3	937	738	608	485	919	5,054
4	1,539	1,163	911	781	1,417	8,038
5	1,710	1,294	1,090	866	1,728	9,381
6	1,262	1,014	856	714	1,322	7,360
7	594	562	431	376	745	3,879
8	184	221	194	142	242	1,427
9	36	51	27	40	66	347
10	6	34	5	8	7	83
.	920	1,269	1,112	882	995	7,180
Total	8,245	7,075	5,799	4,737	8,334	47,778

	Survey wave		
irecall	6	7	Total
-9	0	0	9
0	230	204	1,744
1	144	119	892
2	336	309	2,384
3	728	639	5,054
4	1,185	1,042	8,038
5	1,454	1,239	9,381
6	1,172	1,020	7,360
7	609	562	3,879
8	253	191	1,427
9	68	59	347
10	11	12	83
.	1,086	916	7,180
Total	7,276	6,312	47,778

```
405 recall drecall dwrddlyrc
  (47,778 missing values generated)
  (8,245 real changes made)
  (920 real changes made, 920 to missing)
  (286 real changes made)
  (7,075 real changes made)
  (1,269 real changes made, 1,269 to missing)
  (204 real changes made)
  (5,799 real changes made)
  (1,112 real changes made, 1,112 to missing)
  (155 real changes made)
  (4,737 real changes made)
  (882 real changes made, 882 to missing)
  (125 real changes made)
  (8,334 real changes made)
  (995 real changes made, 995 to missing)
  (215 real changes made)
  (7,276 real changes made)
  (1,086 real changes made, 1,086 to missing)
  (155 real changes made)
  (6,312 real changes made)
  (916 real changes made, 916 to missing)
  (125 real changes made)
```

			Survey wave			
drecall	1	2	3	4	5	Total
-9	0	0	0	0	9	9
0	1,395	1,021	832	656	1,228	6,937
1	589	413	305	270	525	2,904
2	876	623	479	374	744	4,258
3	1,216	924	734	634	1,184	6,475
4	1,411	1,104	921	695	1,391	7,739
5	1,036	911	731	630	1,176	6,432
6	526	515	426	363	666	3,632
7	195	203	182	159	305	1,542
8	61	74	51	54	81	492
9	19	13	20	20	30	160
10	1	5	6	0	0	18
.	920	1,269	1,112	882	995	7,180
Total	8,245	7,075	5,799	4,737	8,334	47,778

	Survey wave		
drecall	6	7	Total
-9	0	0	9
0	991	814	6,937
1	418	384	2,904
2	596	566	4,258
3	950	833	6,475
4	1,171	1,046	7,739
5	1,058	890	6,432
6	615	521	3,632
7	260	238	1,542
8	98	73	492
9	27	31	160
10	6	0	18
.	1,086	916	7,180
Total	7,276	6,312	47,778

```
406
407 gen wordrecall0_20=irecall+drecall
   (7,180 missing values generated)

408
409 //overall cognitive domain score, assigns cutoffs for each of the domain varia
   > bles
410 gen clock65=0 if clock_scorer>1 & clock_scorer<=5
   (10,087 missing values generated)

411 replace clock65=1 if inlist(clock_scorer,0,1)
   (2,907 real changes made)

412
413 gen word65=0 if wordrecall0_20>3 & wordrecall0_20<=20
   (12,837 missing values generated)

414 replace word65=1 if inlist(wordrecall0_20,0,1,2,3)
   (5,648 real changes made)

415
416 gen datena65=0 if date_prvp>3 & date_prvp<=8
   (11,292 missing values generated)

417 replace datena65=1 if inlist(date_prvp,0,1,2,3)
   (4,112 real changes made)

418
419 gen domain65=clock65+word65+datena65
   (7,189 missing values generated)

420 tab domain65 wave, missing
```

		Survey wave				
domain65	1	2	3	4	5	Total
0	5,577	4,553	3,738	2,919	5,906	32,156
1	1,071	784	541	551	866	5,065
2	417	366	326	300	425	2,508
3	260	103	82	85	133	860
.	920	1,269	1,112	882	1,004	7,189
Total	8,245	7,075	5,799	4,737	8,334	47,778

	Survey wave		
domain65	6	7	Total
0	5,072	4,391	32,156
1	654	598	5,065
2	358	316	2,508
3	106	91	860
.	1,086	916	7,189
Total	7,276	6,312	47,778

```
421
422 //now apply to dementia 3 category variable
423 replace dem_3_cat=1 if dem_3_cat==. & inlist(speaktosp,1,-1) & inlist(domain65
   > ,2,3)
   (1,873 real changes made)
```

```
424 replace dem_3_cat=2 if dem_3_cat==. & inlist(speaktosp,1,-1) & domain65==1
    (4,524 real changes made)

425 replace dem_3_cat=3 if dem_3_cat==. & inlist(speaktosp,1,-1) & domain65==0
    (31,481 real changes made)

426
427 la def dem3 1"Probable dementia" 2"Possible dementia" 3"No dementia"

428 la val dem_3_cat dem3

429 la var dem_3_cat "Dementia likelihood, 3 categories"

430
431 tab dem_3_cat wave, missing
```

Dementia likelihood, 3 categories	1	2	3	4	Total
-1	636	1,019	915	700	5,640
Probable dementia	1,038	840	718	662	5,851
Possible dementia	996	675	478	498	4,524
No dementia	5,575	4,540	3,688	2,873	31,743
.	0	1	0	4	20
Total	8,245	7,075	5,799	4,737	47,778

Dementia likelihood, 3 categories	5	6	7	Total
-1	758	866	746	5,640
Probable dementia	961	862	770	5,851
Possible dementia	779	572	526	4,524
No dementia	5,823	4,975	4,269	31,743
.	13	1	1	20
Total	8,334	7,276	6,312	47,778

```
432
433 gen dem_2_cat=1 if inlist(dem_3_cat,1,2)
    (37,403 missing values generated)

434 replace dem_2_cat=0 if dem_3_cat==3
    (31,743 real changes made)

435 la var dem_2_cat "Ind prob/possible dementia"

436 tab dem_2_cat wave, missing
```

Ind prob/possible dementia	1	2	3	4	5	Total
0	5,575	4,540	3,688	2,873	5,823	31,743
1	2,034	1,515	1,196	1,160	1,740	10,375
.	636	1,020	915	704	771	5,660
Total	8,245	7,075	5,799	4,737	8,334	47,778

```
       Ind |
  prob/possi |
       ble |        Survey wave
   dementia |        6            7 |     Total
  -----------+----------------------+----------
          0 |     4,975        4,269 |    31,743
          1 |     1,434        1,296 |    10,375
          . |       867          747 |     5,660
  -----------+----------------------+----------
      Total |     7,276        6,312 |    47,778


437 *************************************************
438 //rate memory
439 gen memory=.
  (47,778 missing values generated)

440 forvalues w=1/$w{
    2. replace memory=ratememry if wave==`w' & proxy_ivw==0 //self interview
    3. replace memory=memrygood if wave==`w' & proxy_ivw==1 //proxy interview
    4.
441 }
  (7,026 real changes made)
  (583 real changes made)
  (5,595 real changes made)
  (964 real changes made)
  (4,510 real changes made)
  (897 real changes made)
  (3,719 real changes made)
  (722 real changes made)
  (7,093 real changes made)
  (779 real changes made)
  (6,002 real changes made)
  (894 real changes made)
  (5,266 real changes made)
  (759 real changes made)

442 replace memory=. if inlist(memory,-1)
  (319 real changes made, 319 to missing)

443 la var memory "Rate memory 1=Excell, 5=Poor"

444 la def mem 1"Excellent" 2"Very good" 3"Good" 4"Fair" 5"Poor"

445 la val memory mem

446 tab memory wave, missing
```

```
      Rate |
    memory |
  1=Excell, |                     Survey wave
    5=Poor |      1        2        3        4        5 |     Total
  -----------+-------------------------------------------------+----------
        -8 |      2       17       20       15       13 |        99
        -7 |      4        5        2        0        0 |        14
  Excellent |    912      685      486      335      770 |     4,233
  Very good |  2,290    1,837    1,463    1,153    2,249 |    12,499
      Good |  2,615    2,269    1,891    1,656    2,799 |    15,984
      Fair |  1,314    1,180    1,026      875    1,470 |     8,398
      Poor |    472      439      402      388      562 |     3,263
        . |    636      643      509      315      471 |     3,288
  -----------+-------------------------------------------------+----------
      Total |  8,245    7,075    5,799    4,737    8,334 |    47,778
```

```
     Rate |
   memory |
 1=Excell, |      Survey wave
   5=Poor |       6           7 |      Total
-----------+----------------------+----------
       -8 |      16          16 |         99
       -7 |       1           2 |         14
Excellent |     583         462 |      4,233
Very good |   1,915       1,592 |     12,499
     Good |   2,516       2,238 |     15,984
     Fair |   1,332       1,201 |      8,398
     Poor |     507         493 |      3,263
        . |     406         308 |      3,288
-----------+----------------------+----------
    Total |   7,276       6,312 |     47,778
```

447
448 notes memory: ratememry memrygood

449 notes memory: Rate your memory.

450 notes memory: Located in NHATS Setup, under Part 4.

451 notes memory: Updated: 04/17/19-MH

452 **
453 //total number self reported medical conditions, ever
454 //note that depression and anxeity are from the specific interview questions
455 //the others are all if the person has reported the condition in any interview
  >   wave
456 egen sr_numconditions1=anycount(sr_ami_ever sr_stroke_ever sr_cancer_ever ///
  >   sr_hip_ever sr_heart_dis_ever sr_htn_ever sr_ra_ever sr_osteoprs_ever
  > ///
  >   sr_diabetes_ever sr_lung_dis_ever sr_dementia_ever sr_phq2_depressed /
  > //
  >   sr_gad2_anxiety), values(1)

457 replace sr_numconditions1=. if ivw_type!=1
  (5,640 real changes made, 5,640 to missing)

458 la var sr_numconditions1 "Count medical conditions"

459 tab sr_numconditions1 wave, missing

```
    Count |
  medical |                    Survey wave
conditions |      1          2          3          4          5 |      Total
-----------+-------------------------------------------------------+----------
        0 |     570        357        233        161        449 |      2,311
        1 |   1,163        840        613        444      1,003 |      5,390
        2 |   1,685      1,287        957        746      1,556 |      8,520
        3 |   1,606      1,275      1,029        854      1,601 |      8,940
        4 |   1,107        931        830        719      1,254 |      6,908
        5 |     728        652        578        509        791 |      4,702
        6 |     389        379        298        285        492 |      2,668
        7 |     213        185        183        175        235 |      1,489
        8 |      99         84         90         83        113 |        714
        9 |      32         40         43         37         47 |        300
       10 |      15         19         20         15         20 |        127
       11 |       2          4          8          7         12 |         52
       12 |       0          3          2          2          3 |         16
       13 |       0          0          0          0          0 |          1
        . |     636      1,019        915        700        758 |      5,640
-----------+-------------------------------------------------------+----------
    Total |   8,245      7,075      5,799      4,737      8,334 |     47,778
```

```
      Count |
    medical |      Survey wave
 conditions |        6          7 |     Total
-----------+----------------------+----------
          0 |       310        231 |     2,311
          1 |       743        584 |     5,390
          2 |     1,240      1,049 |     8,520
          3 |     1,382      1,193 |     8,940
          4 |     1,103        964 |     6,908
          5 |       753        691 |     4,702
          6 |       431        394 |     2,668
          7 |       242        256 |     1,489
          8 |       122        123 |       714
          9 |        52         49 |       300
         10 |        20         18 |       127
         11 |         9         10 |        52
         12 |         3          3 |        16
         13 |         0          1 |         1
          . |       866        746 |     5,640
-----------+----------------------+----------
      Total |     7,276      6,312 |    47,778
```

460 notes sr_numconditions1: Counting number of medical conditions.

461 notes sr_numconditions1: Located in NHATS Setup, under Part 4.

462 notes sr_numconditions1: Updated: 04/17/19-MH

463
464 local ivars srh srh_fp sr_ami_raw sr_ami_ever sr_ami_new sr_stroke_raw sr_stro
  > ke_ever sr_stroke_new sr_cancer_raw sr_cancer_ever sr_cancer_new /7/
  > sr_hip_raw sr_hip_ever sr_hip_new sr_heart_dis_raw sr_heart_dis_ever sr_heart_
  > dis_new sr_htn_raw sr_htn_ever sr_htn_new sr_ra_raw /7/
  > sr_ra_ever sr_ra_new sr_osteoprs_raw sr_osteoprs_ever sr_osteoprs_new sr_diabe
  > tes_raw sr_diabetes_ever sr_diabetes_new sr_lung_dis_raw ///
  > sr_lung_dis_ever sr_lung_dis_new sr_dementia_raw sr_dementia_ever sr_dementia_
  > new

465 foreach w in `ivars'{
  2. tab `w'
  3. }

```
       Self |
   reported |
    health, |
categorical |      Freq.     Percent        Cum.
-----------+------------------------------------
         -8 |         31        0.07        0.07
         -7 |          2        0.00        0.08
  Excellent |      4,657       11.05       11.13
  Very good |     11,993       28.46       39.59
       Good |     14,294       33.92       73.51
       Fair |      8,450       20.05       93.57
       Poor |      2,711        6.43      100.00
-----------+------------------------------------
      Total |     42,138      100.00
```

```
       Self |
   reported |
health=fair |
      /poor |      Freq.     Percent        Cum.
-----------+------------------------------------
         -8 |         31        0.07        0.07
         -7 |          2        0.00        0.08
          0 |     30,944       73.43       73.51
          1 |     11,161       26.49      100.00
-----------+------------------------------------
      Total |     42,138      100.00
```

```
Self report |
     Heart |
Attack, Raw |       Freq.      Percent         Cum.
------------+-----------------------------------------
         -8 |          58         0.14         0.14
         -7 |           1         0.00         0.14
          0 |      39,550        93.86        94.00
          1 |       2,529         6.00       100.00
------------+-----------------------------------------
      Total |      42,138       100.00

  Ever Self |
     report |
      Heart |
     Attack |       Freq.      Percent         Cum.
------------+-----------------------------------------
         -8 |         120         0.28         0.28
         -7 |           3         0.01         0.29
          0 |      35,023        83.12        83.41
          1 |       6,992        16.59       100.00
------------+-----------------------------------------
      Total |      42,138       100.00

Self report |
     Heart |
     Attack |
 since prev |
       year |       Freq.      Percent         Cum.
------------+-----------------------------------------
         -8 |          50         0.14         0.14
         -7 |           1         0.00         0.15
          0 |      33,113        95.90        96.05
          1 |       1,365         3.95       100.00
------------+-----------------------------------------
      Total |      34,529       100.00

Self report |
Stroke, Raw |       Freq.      Percent         Cum.
------------+-----------------------------------------
         -8 |          60         0.14         0.14
         -7 |           1         0.00         0.14
          0 |      39,924        94.75        94.89
          1 |       2,153         5.11       100.00
------------+-----------------------------------------
      Total |      42,138       100.00

  Ever Self |
     report |
     Stroke |       Freq.      Percent         Cum.
------------+-----------------------------------------
         -8 |         122         0.29         0.29
         -7 |           3         0.01         0.30
          0 |      36,555        86.75        87.05
          1 |       5,458        12.95       100.00
------------+-----------------------------------------
      Total |      42,138       100.00

Self report |
     Stroke |
 since prev |
       year |       Freq.      Percent         Cum.
------------+-----------------------------------------
         -8 |          52         0.15         0.15
         -7 |           1         0.00         0.15
          0 |      33,215        96.19        96.35
          1 |       1,261         3.65       100.00
------------+-----------------------------------------
      Total |      34,529       100.00
```

```
Self report |
Cancer, Raw |       Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |          37         0.09        0.09
         -7 |           3         0.01        0.09
          0 |      37,348        88.63       88.73
          1 |       4,750        11.27      100.00
------------+-----------------------------------
      Total |      42,138       100.00


    Ever Self |
      report |
      Cancer |       Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |          85         0.20        0.20
         -7 |          10         0.02        0.23
          0 |      29,831        70.79       71.02
          1 |      12,212        28.98      100.00
------------+-----------------------------------
      Total |      42,138       100.00


Self report |
    Cancer |
  since prev |
       year |       Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |          35         0.10        0.10
         -7 |           2         0.01        0.11
          0 |      31,695        91.79       91.90
          1 |       2,797         8.10      100.00
------------+-----------------------------------
      Total |      34,529       100.00


Self report |
        Hip |
  Fracture, |
        Raw |       Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |          15         0.04        0.04
         -7 |           1         0.00        0.04
          0 |      41,145        97.64       97.68
          1 |         977         2.32      100.00
------------+-----------------------------------
      Total |      42,138       100.00


   Ever Self |
 report Hip |
   Fracture |
 (since age |
        50) |       Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |          34         0.08        0.08
         -7 |           3         0.01        0.09
          0 |      39,564        93.89       93.98
          1 |       2,537         6.02      100.00
------------+-----------------------------------
      Total |      42,138       100.00


Self report |
        Hip |
   Fracture |
 since prev |
       year |       Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |          11         0.03        0.03
         -7 |           1         0.00        0.03
          0 |      33,919        98.23       98.27
          1 |         598         1.73      100.00
------------+-----------------------------------
      Total |      34,529       100.00
```

sr_heart_dis_raw	Freq.	Percent	Cum.
-8	77	0.18	0.18
-7	1	0.00	0.19
No	32,845	77.95	78.13
Yes	2,844	6.75	84.88
Previously reported	6,371	15.12	100.00
Total	42,138	100.00	

Self report Heart Disease	Freq.	Percent	Cum.
-8	77	0.18	0.18
-7	1	0.00	0.19
0	32,845	77.95	78.13
1	9,215	21.87	100.00
Total	42,138	100.00	

Self report Heart Disease since prev year	Freq.	Percent	Cum.
-8	61	0.18	0.18
-7	1	0.00	0.18
0	33,034	95.67	95.85
1	1,433	4.15	100.00
Total	34,529	100.00	

sr_htn_raw	Freq.	Percent	Cum.
-8	43	0.10	0.10
No	12,220	29.00	29.10
Yes	8,331	19.77	48.87
Previously reported	21,544	51.13	100.00
Total	42,138	100.00	

Self report high blood pressure	Freq.	Percent	Cum.
-8	43	0.10	0.10
0	12,220	29.00	29.10
1	29,875	70.90	100.00
Total	42,138	100.00	

Self report high blood pressure since prev year	Freq.	Percent	Cum.
-8	33	0.10	0.10
0	31,273	90.57	90.67
1	3,223	9.33	100.00
Total	34,529	100.00	

```
         sr_ra_raw |      Freq.      Percent        Cum.
-------------------+-----------------------------------
              -8 |         44         0.10        0.10
              -7 |          1         0.00        0.11
              No |     15,616        37.06       37.17
             Yes |      7,551        17.92       55.09
Previously reported |   18,926        44.91      100.00
-------------------+-----------------------------------
           Total |     42,138       100.00
```

```
Self report |
  arthritis |      Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |         44         0.10        0.10
         -7 |          1         0.00        0.11
          0 |     15,616        37.06       37.17
          1 |     26,477        62.83      100.00
------------+-----------------------------------
      Total |     42,138       100.00
```

```
Self report |
  arthritis |
 since prev |
       year |      Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |         29         0.08        0.08
          0 |     31,197        90.35       90.43
          1 |      3,303         9.57      100.00
------------+-----------------------------------
      Total |     34,529       100.00
```

```
   sr_osteoprs_raw |      Freq.      Percent        Cum.
-------------------+-----------------------------------
              -8 |        131         0.31        0.31
              -7 |          1         0.00        0.31
              No |     31,161        73.95       74.26
             Yes |      3,165         7.51       81.77
Previously reported |    7,680        18.23      100.00
-------------------+-----------------------------------
           Total |     42,138       100.00
```

```
Self report |
osteoporosi |
          s |      Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |        131         0.31        0.31
         -7 |          1         0.00        0.31
          0 |     31,161        73.95       74.26
          1 |     10,845        25.74      100.00
------------+-----------------------------------
      Total |     42,138       100.00
```

```
Self report |
osteoporosi |
   s since |
  prev year |      Freq.      Percent        Cum.
------------+-----------------------------------
         -8 |        104         0.30        0.30
         -7 |          1         0.00        0.30
          0 |     32,818        95.04       95.35
          1 |      1,606         4.65      100.00
------------+-----------------------------------
      Total |     34,529       100.00
```

```
  sr_diabetes_raw |       Freq.      Percent         Cum.
-------------------+-----------------------------------------
              -8 |          22         0.05         0.05
              -7 |           2         0.00         0.06
              No |      30,435        72.23        72.28
             Yes |       3,355         7.96        80.25
Previously reported |    8,324        19.75       100.00
-------------------+-----------------------------------------
           Total |      42,138       100.00
```

```
Self report |
    diabetes |       Freq.      Percent         Cum.
------------+-----------------------------------------
         -8 |          22         0.05         0.05
         -7 |           2         0.00         0.06
          0 |      30,435        72.23        72.28
          1 |      11,679        27.72       100.00
------------+-----------------------------------------
      Total |      42,138       100.00
```

```
Self report |
   diabetes |
 since prev |
       year |       Freq.      Percent         Cum.
------------+-----------------------------------------
         -8 |          20         0.06         0.06
         -7 |           1         0.00         0.06
          0 |      33,078        95.80        95.86
          1 |       1,430         4.14       100.00
------------+-----------------------------------------
      Total |      34,529       100.00
```

```
  sr_lung_dis_raw |       Freq.      Percent         Cum.
-------------------+-----------------------------------------
              -8 |          30         0.07         0.07
              -7 |           1         0.00         0.07
              No |      34,367        81.56        81.63
             Yes |       2,362         5.61        87.24
Previously reported |    5,378        12.76       100.00
-------------------+-----------------------------------------
           Total |      42,138       100.00
```

```
Self report |
       Lung |
    Disease |       Freq.      Percent         Cum.
------------+-----------------------------------------
         -8 |          30         0.07         0.07
         -7 |           1         0.00         0.07
          0 |      34,367        81.56        81.63
          1 |       7,740        18.37       100.00
------------+-----------------------------------------
      Total |      42,138       100.00
```

```
Self report |
       Lung |
    Disease |
 since prev |
       year |       Freq.      Percent         Cum.
------------+-----------------------------------------
         -8 |          25         0.07         0.07
         -7 |           1         0.00         0.08
          0 |      33,295        96.43        96.50
          1 |       1,208         3.50       100.00
------------+-----------------------------------------
      Total |      34,529       100.00
```

```
    sr_dementia_raw |      Freq.       Percent         Cum.
--------------------+---------------------------------------
                -8 |        33          0.08          0.08
                -7 |         2          0.00          0.08
                No |    38,787         92.05         92.13
               Yes |     1,371          3.25         95.38
 Previously reported |    1,945          4.62        100.00
--------------------+---------------------------------------
              Total |    42,138        100.00
```

```
  Self report |
     Dementia |      Freq.       Percent         Cum.
-------------+---------------------------------------
          -8 |        33          0.08          0.08
          -7 |         2          0.00          0.08
           0 |    38,787         92.05         92.13
           1 |     3,316          7.87        100.00
-------------+---------------------------------------
        Total |    42,138        100.00
```

```
  Self report |
     Dementia |
   since prev |
         year |      Freq.       Percent         Cum.
-------------+---------------------------------------
          -8 |        27          0.08          0.08
          -7 |         2          0.01          0.08
           0 |    33,586         97.27         97.35
           1 |       914          2.65        100.00
-------------+---------------------------------------
        Total |    34,529        100.00
```

```
466
467 **************************************************
468 save round_1_${w}_cleanv2.dta, replace
    file round_1_7_cleanv2.dta saved

469
470 **************************************************
471 log close
         name:  <unnamed>
          log:  E:\nhats\nhats_code\NHATS data setup\logs\/3_nhats_cleaning_18_Apr_
    > 2019.smcl
      log type:  text
     closed on:  18 Apr 2019, 13:08:17
    --------------------------------------------------------------------------------
```