```
 1 .
 2 .
 3 . **STEP 8: DETERMINE SAMPLE WITH COMPLETE DATA ON SLEEP TOTAL SCORE IN 2006, DEMENTIA PROBABILITY DATA AT 2006,
 4 .
 5 . use HRS_PROJECTSLEEPCONGMORT_finLONG,clear

 6 .
 7 .
 8 . **AGE >50 in 2006**
 9 .
10 . capture drop sample50plus2006

11 . gen sample50plus2006=.
   (43,561 missing values generated)

12 . replace sample50plus2006=1 if r8agey_e>50 & r8agey_e~=.
   (17,809 real changes made)

13 . replace sample50plus2006=0 if sample50plus2006~=1 & r8agey_e~=.
   (660 real changes made)

14 .
15 . tab sample50plus2006
```

sample50plus2006	Freq.	Percent	Cum.
0	**660**	**3.57**	**3.57**
1	**17,809**	**96.43**	**100.00**
Total	**18,469**	**100.00**	

```
16 .
17 . capture drop samplealivein2006

18 . gen samplealivein2006=.
   (43,561 missing values generated)

19 . replace samplealivein2006=1 if inw8==1
   (18,469 real changes made)

20 . replace samplealivein2006=0 if samplealivein2006~=1
   (25,092 real changes made)

21 .
22 . tab samplealivein2006
```

samplealivein2006	Freq.	Percent	Cum.
0	**25,092**	**57.60**	**57.60**
1	**18,469**	**42.40**	**100.00**
Total	**43,561**	**100.00**	

```
23 .
24 . capture drop samplepoorsleep2006

25 . gen samplepoorsleep2006=.
(43,561 missing values generated)

26 . replace samplepoorsleep2006=1 if poorsleep_2006~=.
(18,242 real changes made)

27 . replace samplepoorsleep2006=0 if samplepoorsleep2006~=1
(25,319 real changes made)

28 .
29 . tab samplepoorsleep2006
```

samplepoorsleep2006	Freq.	Percent	Cum.
0	**25,319**	**58.12**	**58.12**
1	**18,242**	**41.88**	**100.00**
Total	**43,561**	**100.00**	

```
30 .
31 . capture drop sampledementia

32 . gen sampledementia=.
(43,561 missing values generated)

33 . replace sampledementia=1 if hrs_year==2006 & hurd_p!=. & expert_p!=. & lasso_p!=.
(7,115 real changes made)

34 . replace sampledementia=0 if sampledementia~=1
(36,446 real changes made)

35 .
36 . tab sampledementia
```

sampledementia	Freq.	Percent	Cum.
0	**36,446**	**83.67**	**83.67**
1	**7,115**	**16.33**	**100.00**
Total	**43,561**	**100.00**	

```
37 .
38 . save, replace
file HRS_PROJECTSLEEPCONGMORT_finLONG.dta saved

39 .
```

```
40 . capture drop sample_final

41 . gen sample_final=.
   (43,561 missing values generated)

42 . replace sample_final=1 if sample50plus2006==1 & samplealivein2006==1 & samplepoorsleep2006==1 & sampledementia=
   (6,991 real changes made)

43 . replace sample_final=0 if sample_final~=1
   (36,570 real changes made)

44 .
45 . tab sample_final
```

sample_final	Freq.	Percent	Cum.
0	**36,570**	**83.95**	**83.95**
1	**6,991**	**16.05**	**100.00**
Total	**43,561**	**100.00**	

```
46 .
47 . save HRS_PROJECTSLEEPCONGMORT_finWIDE, replace
   file HRS_PROJECTSLEEPCONGMORT_finWIDE.dta saved

48 .
49 .
50 .
51 . **STEP 9: MORTALITY VARIABLES FROM 2008 THROUGH 2020: TRACKER FILE INW**
52 .
53 . **dead vs. alive: 2008-2020
54 .
55 . capture drop died

56 . gen died=.
   (43,561 missing values generated)

57 . replace died=1 if (sample_final==1 & knowndeceasedyr~=. & knowndeceasedmo~=.)
   (4,938 real changes made)

58 . replace died=0 if died!=1 & sample_final==1
   (2,053 real changes made)

59 .
60 . tab died if sample_final==1
```

died	Freq.	Percent	Cum.
0	**2,053**	**29.37**	**29.37**
1	**4,938**	**70.63**	**100.00**
Total	**6,991**	**100.00**	

```
61 .
62 .
63 . **Date of death: dod**
64 .
65 . su knowndeceasedmo knowndeceasedyr if sample_final==1
```

Variable	Obs	Mean	Std. dev.	Min	Max
knowndecea~o	4,940	7.217206	8.929908	1	98
knowndecea~r	4,938	2012.807	4.056176	2001	2021

```
66 . tab1 knowndeceasedmo knowndeceasedyr if sample_final==1
```

-> tabulation of knowndeceasedmo if sample_final==1

KNOWN DECEASED - MONTH	Freq.	Percent	Cum.
1	457	9.25	9.25
2	413	8.36	17.61
3	427	8.64	26.26
4	426	8.62	34.88
5	375	7.59	42.47
6	376	7.61	50.08
7	370	7.49	57.57
8	361	7.31	64.88
9	369	7.47	72.35
10	466	9.43	81.78
11	445	9.01	90.79
12	415	8.40	99.19
98	40	0.81	100.00
Total	4,940	100.00	

-> tabulation of knowndeceasedyr if sample_final==1

KNOWN DECEASED - YEAR	Freq.	Percent	Cum.
2001	2	0.04	0.04
2005	1	0.02	0.06
2006	163	3.30	3.36
2007	368	7.45	10.81
2008	367	7.43	18.25
2009	382	7.74	25.98
2010	401	8.12	34.10
2011	378	7.65	41.76
2012	368	7.45	49.21
2013	367	7.43	56.64
2014	348	7.05	63.69
2015	330	6.68	70.37
2016	325	6.58	76.95
2017	309	6.26	83.21
2018	316	6.40	89.61
2019	292	5.91	95.52
2020	203	4.11	99.64
2021	18	0.36	100.00
Total	4,938	100.00	

```
67 .
68 . capture drop deathmonth

69 . gen deathmonth=knowndeceasedmo if knowndeceasedmo~=98
   (25,605 missing values generated)

70 .
71 . capture drop deathyear

72 . gen deathyear=knowndeceasedyr
   (25,479 missing values generated)

73 .
74 . capture drop deathday

75 . gen deathday=14

76 .
77 . capture drop dod

78 . gen dod=mdy(deathmonth, deathday, deathyear)
   (25,609 missing values generated)

79 .
80 . **Date of entry: doenter**
81 . capture drop doenter

82 . gen doenter=mdy(01,01,2006)

83 .
84 . **Date of exit if still alive: doexit**
85 . capture drop doexit

86 . gen doexit=mdy(12,31,2020)

87 .
88 . **Date of exit for censor or dead**
89 . capture drop doevent

90 . gen doevent=.
   (43,561 missing values generated)

91 . replace doevent=dod if died==1 & sample_final==1
   (4,898 real changes made)

92 . replace doevent=doexit if died==0 & sample_final==1
   (2,053 real changes made)

93 .
94 . su doevent
```

Variable	Obs	Mean	Std. dev.	Min	Max
doevent	**6,951**	**20300.17**	**1782.921**	**15140**	**22384**

```
 95 .
 96 . ***Estimated birth date**
 97 .
 98 . capture drop dob

 99 . gen dob=mdy(birthmo,14,birthyr)
   (329 missing values generated)

100 .
101 .
102 .
103 . capture drop ageevent

104 . gen ageevent=(doevent-dob)/365.5
   (36,610 missing values generated)

105 .
106 . capture drop ageenter

107 . gen ageenter=r8agey_e
   (25,092 missing values generated)

108 .
109 . save, replace
   file HRS_PROJECTSLEEPCONGMORT_finWIDE.dta saved

110 .
111 . **STEP 10: STSET FOR MORTALITY OUTCOME***
112 .
113 . capture drop AGE2006

114 . gen AGE2006=ageenter
   (25,092 missing values generated)

115 .
116 . save, replace
   file HRS_PROJECTSLEEPCONGMORT_finWIDE.dta saved

117 .
118 . stset ageevent if sample_final==1, failure(died==1) enter(AGE2006) origin(AGE2006) scale(1)

   Survival-time data settings

            Failure event: died==1
   Observed time interval: (origin, ageevent]
        Enter on or after: time AGE2006
        Exit on or before: failure
        Time for analysis: (time-origin)
                   Origin: time AGE2006
         Keep observations
                   if exp: sample_final==1
```

```
     43,561  total observations
     36,570  ignored at outset because of if exp
         40  event time missing (ageevent>=.)              PROBABLE ERROR
          6  observations end on or before enter()
------------------------------------------------------------------------------
      6,945  observations remaining, representing
      4,892  failures in single-record/single-failure data
 66,265.112  total analysis time at risk and under observation
                                             At risk from t =         0
                                  Earliest observed entry t =         0
                                       Last observed exit t =    15.658

119 .
120 .
121 . stdescribe if sample_final==1

        Failure _d: died==1
  Analysis time _t: (ageevent-origin)
            Origin: time AGE2006
  Enter on or after: time AGE2006

                                    |------------ Per subject ------------|
Category                    Total        Mean         Min      Median         Max
------------------------------------------------------------------------------
Number of subjects           6945
Number of records            6945           1           1           1           1

Entry time (first)                          0           0           0           0
Exit time (final)                    9.541413    .0998611    10.10123     15.658

Subjects with gap               0
Time on gap                     0
Time at risk             66265.112    9.541413    .0998611    10.10123     15.658

Failures                     4892    .7043916           0           1           1
------------------------------------------------------------------------------

122 . stsum if sample_final==1

        Failure _d: died==1
  Analysis time _t: (ageevent-origin)
            Origin: time AGE2006
  Enter on or after: time AGE2006

           |                Incidence     Number of   |------ Survival time ------|
           |  Time at risk       rate      subjects         25%        50%        75%
-----------+------------------------------------------------------------------------
     Total |  66,265.1117   .0738247          6945    5.187416   10.10123          .

123 . strate if sample_final==1

        Failure _d: died==1
  Analysis time _t: (ageevent-origin)
            Origin: time AGE2006
  Enter on or after: time AGE2006

Estimated failure rates
Number of records = 6945
```

D	Y	Rate	Lower	Upper
4892	**6.6e+04**	**0.073825**	**0.071785**	**0.075923**

Notes: Rate = D/Y = failures/person-time.
Lower and Upper are bounds of 95% confidence intervals.

```
124 .
125 . save, replace
    file HRS_PROJECTSLEEPCONGMORT_finWIDE.dta saved

126 .
127 . capture log close
```