



```

1 .
2 . use finaldata_imputed_FINAL,clear

3 .
4 .
5 . **STEP 14: FIGURE 2: COMPARE SURVIVAL PROBABILITIES ACROSS EXPOSURE (poorsleep_2006, create tertiles) AND MEDIA
6 .
7 . mi extract 0

8 .
9 . save finaldata_unimputed_FINAL, replace
   file finaldata_unimputed_FINAL.dta saved

10 .
11 .
12 . 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

```

```

13 .
14 .
15 . stdescribe if sample_final==1

```

```

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

```

Category	Total	Per subject			
		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

```
16 . stsum if sample_final==1
```

```

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

```

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

```
17 . 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.

```

18 .
19 . save, replace
    file finaldata_unimputed_FINAL.dta saved

20 .
21 .
22 . capture drop poorsleep_2006tert

23 . xtile poorsleep_2006tert=poorsleep_2006 if sample_final==1,nq(3)

24 .
25 . bysort poorsleep_2006tert: su poorsleep_2006 if sample_final==1,detail

```

```
-> poorsleep_2006tert = 1
```

poorsleep_2006				
Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	2,372
25%	0	0	Sum of wgt.	2,372

50%	0		Mean	.489882
		Largest	Std. dev.	.500003
75%	1	1		
90%	1	1	Variance	.250003
95%	1	1	Skewness	.0404805
99%	1	1	Kurtosis	1.001639

-> poorsleep_2006tert = 2

poorsleep_2006				
	Percentiles	Smallest		
1%	2	2		
5%	2	2		
10%	2	2	Obs	3,173
25%	2	2	Sum of wgt.	3,173
50%	3		Mean	2.895682
		Largest	Std. dev.	.8125883
75%	4	4		
90%	4	4	Variance	.6602998
95%	4	4	Skewness	.1927942
99%	4	4	Kurtosis	1.539746

-> poorsleep_2006tert = 3

poorsleep_2006				
	Percentiles	Smallest		
1%	5	5		
5%	5	5		
10%	5	5	Obs	1,446
25%	5	5	Sum of wgt.	1,446
50%	6		Mean	6.132089
		Largest	Std. dev.	1.185194
75%	7	9		
90%	8	9	Variance	1.404686
95%	8	9	Skewness	.8089262
99%	9	9	Kurtosis	2.648532

-> poorsleep_2006tert = .

poorsleep_2006				
no observations				

```

26 .
27 . save, replace
    file finaldata_unimputed_FINAL.dta saved

28 .
29 . *****LOWEST TERTILE OF POOR SLEEP QUALITY*****
30 .
31 . sts test hurd_dem if sample_final==1 & poorsleep_2006tert==1, logrank

```

```

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

```

Equality of survivor functions
Log-rank test

hurd_dem	Observed events	Expected events
0	1234	1505.44
1	390	118.56
Total	1624	1624.00

```

    chi2(1) = 692.41
    Pr>chi2 = 0.0000

```

```

32 . sts graph if sample_final==1 & poorsleep_2006tert==1, by(hurd_dem)

```

```

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

```

```

33 .
34 . graph save "FIGURE3A1.gph", replace
    file FIGURE3A1.gph saved

```

```

35 .
36 .
37 .
38 . sts test expert_dem if sample_final==1 & poorsleep_2006tert==1, logrank

```

```

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

```

Equality of survivor functions
Log-rank test

expert_dem	Observed events	Expected events
0	1236	1503.90
1	388	120.10
Total	1624	1624.00

```

    chi2(1) = 665.56
    Pr>chi2 = 0.0000

```

```
39 . sts graph if sample_final==1 & poorsleep_2006tert==1, by(expert_dem)
```

```

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

```

```
40 .
```

```
41 . graph save "FIGURE3A2.gph", replace
    file FIGURE3A2.gph saved
```

```
42 .
```

```
43 .
```

```
44 . sts test lasso_dem if sample_final==1 & poorsleep_2006tert==1, logrank
```

```

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

```

Equality of survivor functions
Log-rank test

lasso_dem	Observed events	Expected events
0	1200	1477.64
1	424	146.36
Total	1624	1624.00

```

      chi2(1) = 594.34
    Pr>chi2 = 0.0000

```

```
45 . sts graph if sample_final==1 & poorsleep_2006tert==1, by(lasso_dem)
```

```

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

```

```
46 .
```

```
47 . graph save "FIGURE3A3.gph", replace
    file FIGURE3A3.gph saved
```

```
48 .
```

```
49 . graph combine "FIGURE3A1.gph" "FIGURE3A2.gph" "FIGURE3A3.gph"
```

```
50 . graph save "FIGURE3A.gph", replace
    file FIGURE3A.gph saved
```

```

51 .
52 .
53 .
54 . *****MIDDLE TERTILE OF POOR SLEEP QUALITY*****
55 .
56 . sts test hurd_dem if sample_final==1 & poorsleep_2006tert==2, logrank

```

```

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

```

Equality of survivor functions
Log-rank test

hurd_dem	Observed events	Expected events
0	1736	2044.50
1	473	164.50
Total	2209	2209.00

```

      chi2(1) = 638.97
      Pr>chi2 = 0.0000

```

```

57 . sts graph if sample_final==1 & poorsleep_2006tert==2, by(hurd_dem)

```

```

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

```

```

58 .
59 . graph save "FIGURE3B1.gph", replace
      file FIGURE3B1.gph saved

```

```

60 .
61 .
62 .
63 . sts test expert_dem if sample_final==1 & poorsleep_2006tert==2, logrank

```

```

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

```

Equality of survivor functions
Log-rank test

expert_dem	Observed events	Expected events
0	1729	2042.50
1	480	166.50
Total	2209	2209.00

```

      chi2(1) = 653.10
      Pr>chi2 = 0.0000

```

```
64 . sts graph if sample_final==1 & poorsleep_2006tert==2, by(expert_dem)
```

```

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

```
65 .
```

```
66 . graph save "FIGURE3B2.gph", replace
    file FIGURE3B2.gph saved
```

```
67 .
```

```
68 .
```

```
69 . sts test lasso_dem if sample_final==1 & poorsleep_2006tert==2, logrank
```

```

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

Equality of survivor functions
Log-rank test

lasso_dem	Observed events	Expected events
0	1700	2025.04
1	509	183.96
Total	2209	2209.00

```

      chi2(1) = 641.30
Pr>chi2 = 0.0000
```

```
70 . sts graph if sample_final==1 & poorsleep_2006tert==2, by(lasso_dem)
```

```

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

```
71 .
```

```
72 . graph save "FIGURE3B3.gph", replace
    file FIGURE3B3.gph saved
```

```
73 .
```

```
74 . graph combine "FIGURE3B1.gph" "FIGURE3B2.gph" "FIGURE3B3.gph"
```

```
75 . graph save "FIGURE3B.gph", replace
    file FIGURE3B.gph saved
```

```

76 .
77 .
78 . *****UPPERMOST TERTILE OF POOR SLEEP QUALITY*****
79 .
80 . sts test hurd_dem if sample_final==1 & poorsleep_2006tert==3, logrank

```

```

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

```

Equality of survivor functions
Log-rank test

hurd_dem	Observed events	Expected events
0	830	960.95
1	229	98.05
Total	1059	1059.00

```

      chi2(1) = 196.18
      Pr>chi2 = 0.0000

```

```

81 . sts graph if sample_final==1 & poorsleep_2006tert==3, by(hurd_dem)

```

```

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

```

```

82 .
83 . graph save "FIGURE3C1.gph", replace
      file FIGURE3C1.gph saved

```

```

84 .
85 .
86 .
87 . sts test expert_dem if sample_final==1 & poorsleep_2006tert==3, logrank

```

```

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

```

Equality of survivor functions
Log-rank test

expert_dem	Observed events	Expected events
0	803	944.96
1	256	114.04
Total	1059	1059.00

```

      chi2(1) = 201.73
      Pr>chi2 = 0.0000

```



```
88 . sts graph if sample_final==1 & poorsleep_2006tert==3, by(expert_dem)
```

```

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

```

```
89 .
```

```
90 . graph save "FIGURE3C2.gph", replace
    file FIGURE3C2.gph saved
```

```
91 .
```

```
92 .
```

```
93 . sts test lasso_dem if sample_final==1 & poorsleep_2006tert==3, logrank
```

```

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

```

Equality of survivor functions
Log-rank test

lasso_dem	Observed events	Expected events
0	797	934.98
1	262	124.02
Total	1059	1059.00

```

      chi2(1) = 176.82
    Pr>chi2 = 0.0000

```

```
94 . sts graph if sample_final==1 & poorsleep_2006tert==3, by(lasso_dem)
```

```

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

```

```
95 .
```

```
96 . graph save "FIGURE3C3.gph", replace
    file FIGURE3C3.gph saved
```

```
97 .
```

```
98 . graph combine "FIGURE3C1.gph" "FIGURE3C2.gph" "FIGURE3C3.gph"
```

```
99 . graph save "FIGURE3C.gph", replace
    file FIGURE3C.gph saved
```

```
100 .
```

```
101 .
```

```
102 . capture log close
```