```
                                                                  ___  ____  ____  ____  ____(R)
                                                                 /__    /   ____/   /   ____/
                                                                ___/   /   /___/   /   /___/
                                                                  Statistics/Data analysis

                                                                     User: Airline Route analysis
                                                                  Project: Route Analysis
[redacted]
      name:  <unnamed>
[redacted]
  log type:  smcl
 opened on:  15 Oct 2025, 21:56:28

1 . br

2 . sum
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,149	37.42684	2325.309	5.42e-20	196608
afchnge	7,150	.4969231	2.158674	-127	73
highearn	7,150	.4179021	2.11024	-128	64
male	7,134	.6582562	4.001451	-128	5
married	6,853	.6983803	.5229067	0	16
hosp	7,150	.2360839	2.237772	-128	32
indust	7,125	2.270316	2.452622	-127	67
injtype	7,150	4.46028	2.452977	-125	71
age	7,146	34.69633	12.71066	-109	98
prewage	7,150	1.07e+08	9.01e+09	-9989325	7.62e+11
totmed	7,150	8.17e+16	6.91e+18	0	5.84e+20
injdes	7,150	4386.295	1335.548	1007	11732
benefit	7,150	6.27e+17	5.30e+19	-122.85	4.48e+21
ky	7,150	.8085315	1.162601	0	65
mi	7,150	.2072727	1.752836	-128	64
ldurat	7,150	1.331685	1.307815	-1.390204	5.204007
afhigh	7,150	.2078322	.8978582	0	65
lprewage	7,150	1.29e+16	1.09e+18	-5.08466	9.19e+19
lage	7,146	36.20351	2756.299	-3.178054	233003.3
ltotmed	7,150	3.49e+18	2.92e+20	-6.926684	2.47e+22
head	7,150	.0405594	1.798191	-128	64
neck	7,150	-.0262937	3.24866	-128	64
upextr	7,150	.3083916	.8046755	0	33
trunk	7,150	.0496503	3.588565	-128	64
lowback	7,150	.2685315	.509858	0	16
lowextr	7,150	.246993	.9757022	0	72
occdis	7,150	-.0002797	1.569663	-128	32
manuf	7,125	.2762105	2.492899	-127	65
construc	7,125	.141193	1.637141	-128	33
highlpre	7,150	2.481359	3.055368	-7.957778	7.36714

```
3 . des
[redacted]
  Observations:         7,150
     Variables:            30                  27 Jun 1997 14:53
```

Variable name	Storage type	Display format	Value label	Variable label
durat	float	%9.0g		duration of benefits
afchnge	byte	%9.0g		=1 if after change in benefits
highearn	byte	%9.0g		=1 if high earner
male	byte	%9.0g		=1 if male
married	byte	%9.0g		=1 if married
hosp	byte	%9.0g		=1 if inj. required hosp. stay
indust	byte	%9.0g		industry
injtype	byte	%9.0g		type of injury
age	byte	%9.0g		age at time of injury
prewage	float	%9.0g		previous weekly wage, 1982 $

totmed	float	%9.0g	**total med. costs, 1982 $**
injdes	int	%9.0g	**4 digit injury description**
benefit	float	%9.0g	**real dollar value of benefit**
ky	byte	%9.0g	**=1 for kentucky**
mi	byte	%9.0g	**=1 for michigan**
ldurat	float	%9.0g	**log(durat)**
afhigh	byte	%9.0g	**afchnge*highearn**
lprewage	float	%9.0g	**log(wage)**
lage	float	%9.0g	**log(age)**
ltotmed	float	%9.0g	**log(totmed); = 0 if totmed < 1**
head	byte	%9.0g	**=1 if head injury**
neck	byte	%9.0g	**=1 if neck injury**
upextr	byte	%9.0g	**=1 if upper extremities injury**
trunk	byte	%9.0g	**=1 if trunk injury**
lowback	byte	%9.0g	**=1 if lower back injury**
lowextr	byte	%9.0g	**=1 if lower extremities injury**
occdis	byte	%9.0g	**=1 if occupational disease**
manuf	byte	%9.0g	**=1 if manufacturing industry**
construc	byte	%9.0g	**=1 if construction industry**
highlpre	float	%9.0g	**highearn*lprewage**

Sorted by:

```
 4 . * Install estout package if not already

 5 .
 6 . ssc install estout, replace
   checking estout consistency and verifying not already installed...
   installing into C:\Users\USER\ado\plus\...
   installation complete.

 7 .
 8 .
 9 .
10 . * Main descriptive variables

11 .
12 . estpost summarize durat benefit prewage totmed age, by(ky)
   option by() not allowed
   r(198);

13 .
14 .
15 .
16 . * Export table to Word or Excel

17 .
18 . esttab using "summary_stats.doc", cells("count mean sd min max") replace
   last estimates (.) not found
   r(301);

19 .
20 . * or to Excel:

21 .
```

```
22 . esttab using "summary_stats.csv", cells("count mean sd min max") replace
last estimates (.) not found
r(301);

23 . * Install estout if not yet done

24 .
25 . ssc install estout, replace
checking estout consistency and verifying not already installed...
all files already exist and are up to date.

26 .
27 .
28 .
29 . * Post and export summary stats by state

30 .
31 . estpost tabstat durat benefit prewage totmed age, by(ky) ///
option / not allowed
r(198);

32 .
33 .    statistics(count mean sd min max)
command statistics is unrecognized
r(199);

34 .
35 .
36 .
37 . * Export to Word

38 .
39 . esttab using "summary_by_state.doc", main(mean) aux(sd) replace
last estimates (.) not found
r(301);

40 .
41 .
42 .
43 . * Or export to Excel (CSV)

44 .
45 . esttab using "summary_by_state.csv", main(mean) aux(sd) replace
last estimates (.) not found
r(301);

46 . * Install required package once

47 .
48 . ssc install estout, replace
checking estout consistency and verifying not already installed...
all files already exist and are up to date.

49 .
50 .
```

```
51 .
52 . * Run tabstat by state (no line breaks)

53 .
54 . estpost tabstat durat benefit prewage totmed age, by(ky) ///
option / not allowed
r(198);

55 .
56 .     statistics(count mean sd min max) columns(statistics)
command statistics is unrecognized
r(199);

57 .
58 .
59 .
60 . * Export summary table (Word)

61 .
62 . esttab using "summary_by_state.doc", replace
last estimates (.) not found
r(301);

63 .
64 .
65 .
66 . * Export summary table (Excel-friendly CSV)

67 .
68 . esttab using "summary_by_state.csv", replace
last estimates (.) not found
r(301);

69 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,149	37.42684	2325.309	5.42e-20	196608
benefit	7,150	6.27e+17	5.30e+19	-122.85	4.48e+21
prewage	7,150	1.07e+08	9.01e+09	-9989325	7.62e+11
totmed	7,150	8.17e+16	6.91e+18	0	5.84e+20
age	7,146	34.69633	12.71066	-109	98

```
70 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,525	13.61082	32.41567	.25	182
benefit	1,525	208.7785	53.15606	28.4958	473.0752
prewage	1,525	416.483	224.0734	159.25	1583.1
totmed	1,525	1946.272	5426.637	0	113030
age	1,525	36.45836	12.6175	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,618	43.92572	2623.044	5.42e-20	196608
benefit	5,619	7.97e+17	5.98e+19	-122.85	4.48e+21
prewage	5,619	1.36e+08	1.02e+10	-9989325	7.62e+11
totmed	5,619	1.04e+17	7.79e+18	0	5.84e+20
age	5,615	34.21959	12.69619	-109	98

-> ky = 5

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1	5	.	5	5
benefit	1	102.125	.	102.125	102.125
prewage	1	152.425	.	152.425	152.425
totmed	1	65.65064	.	65.65064	65.65064
age	1	24	.	24	24

-> ky = 9

Variable	Obs	Mean	Std. dev.	Min	Max
durat	3	1.75	1.984313	.25	4
benefit	3	100.8583	35.25027	62.5625	131.95
prewage	3	156.5958	44.67253	109.2	197.925
totmed	3	2305025	3992110	169.9883	6914717
age	3	33	9	24	42

-> ky = 65

Variable	Obs	Mean	Std. dev.	Min	Max
durat	2	11.5	12.02082	3	20
benefit	2	113.75	0	113.75	113.75
prewage	2	170.625	0	170.625	170.625
totmed	2	425.5569	266.9266	236.8112	614.3025
age	2	37.5	21.92031	22	53

71 . tab ky

=1 for kentucky	Freq.	Percent	Cum.
0	1,525	21.33	21.33
1	5,619	78.59	99.92
5	1	0.01	99.93
9	3	0.04	99.97
65	2	0.03	100.00
Total	7,150	100.00	

72 . drop if ky > 1
(6 observations deleted)

73 . tab ky

=1 for kentucky	Freq.	Percent	Cum.
0	1,525	21.35	21.35
1	5,619	78.65	100.00
Total	7,144	100.00	

```
74 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,525	13.61082	32.41567	.25	182
benefit	1,525	208.7785	53.15606	28.4958	473.0752
prewage	1,525	416.483	224.0734	159.25	1583.1
totmed	1,525	1946.272	5426.637	0	113030
age	1,525	36.45836	12.6175	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,618	43.92572	2623.044	5.42e-20	196608
benefit	5,619	7.97e+17	5.98e+19	-122.85	4.48e+21
prewage	5,619	1.36e+08	1.02e+10	-9989325	7.62e+11
totmed	5,619	1.04e+17	7.79e+18	0	5.84e+20
age	5,615	34.21959	12.69619	-109	98

```
75 . * 1. Keep only Kentucky (1) and Michigan (0)

76 .
77 . drop if ky > 1
   (0 observations deleted)

78 .
79 .
80 .
81 . * 2. Confirm cleanup

82 .
83 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,525	21.35	21.35
1	5,619	78.65	100.00
Total	7,144	100.00	

```
84 .
85 .
86 .
87 . * 3. Re-run Step 1: Overall summary stats

88 .
89 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,143	37.45362	2326.286	5.42e-20	196608
benefit	7,144	6.27e+17	5.30e+19	-122.85	4.48e+21
prewage	7,144	1.07e+08	9.02e+09	-9989325	7.62e+11
totmed	7,144	8.17e+16	6.91e+18	0	5.84e+20
age	7,140	34.69776	12.7117	-109	98

```
. 
. 
. 
. * 4. Then re-run Step 2: By-state summary

. 
. by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,525	13.61082	32.41567	.25	182
benefit	1,525	208.7785	53.15606	28.4958	473.0752
prewage	1,525	416.483	224.0734	159.25	1583.1
totmed	1,525	1946.272	5426.637	0	113030
age	1,525	36.45836	12.6175	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,618	43.92572	2623.044	5.42e-20	196608
benefit	5,619	7.97e+17	5.98e+19	-122.85	4.48e+21
prewage	5,619	1.36e+08	1.02e+10	-9989325	7.62e+11
totmed	5,619	1.04e+17	7.79e+18	0	5.84e+20
age	5,615	34.21959	12.69619	-109	98

```
. describe benefit prewage totmed
```

Variable name	Storage type	Display format	Value label	Variable label
benefit	float	%9.0g		real dollar value of benefit
prewage	float	%9.0g		previous weekly wage, 1982 $
totmed	float	%9.0g		total med. costs, 1982 $

```
. list benefit prewage totmed if ky==1 & (benefit>10000 | prewage>10000 | totmed>10000) in 1/20

. list benefit prewage totmed if ky==1 & (benefit>10000 | prewage>10000 | totmed>10000) in 1/20

. list benefit if ky==1, clean sort(-benefit) in 1/10
option sort() not allowed
r(198);

. 
. list prewage if ky==1, clean sort(-prewage) in 1/10
option sort() not allowed
r(198);

. 
. list totmed  if ky==1, clean sort(-totmed)  in 1/10
option sort() not allowed
r(198);
```

```
104 . * Biggest benefits

105 .
106 . sort benefit

107 .
108 . list benefit if ky==1 in -10/l, clean

             benefit
    7140.    502.775
    7141.   742.2209
    7142.    6633677
    7143.    8125645
    7144.   4.48e+21

109 .
110 .
111 .
112 . * Biggest prewages

113 .
114 . sort prewage

115 .
116 . list prewage if ky==1 in -10/l, clean

             prewage
    7141.   1153.602
    7142.   1237.861
    7144.   7.62e+11

117 .
118 .
119 .
120 . * Biggest total medical costs

121 .
122 . sort totmed

123 .
124 . list totmed if ky==1 in -10/l, clean

              totmed
    7135.   65920.28
    7137.   87644.78
    7139.   116883.1
    7140.   198726.8
    7141.    2323377
    7142.   8.61e+11
    7143.   8.76e+11
    7144.   5.84e+20

125 . sort benefit

126 .
```

```
127 . list benefit if ky==1 in 1/10, clean

      benefit
  1.    -122.85
  2.   2.21e-37
  3.    8.03335
  4.    14.8692
  5.     15.925
  6.    17.0625
  7.    17.3474
  8.       18.2
  9.    19.3375
 10.     20.475

128 . drop if benefit > 10000 | prewage > 10000 | totmed > 50000
(17 observations deleted)

129 . summarize durat benefit prewage totmed age if ky==1

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
       durat |      5,604    8.795898    21.28045   5.42e-20        182
     benefit |      5,605    150.5393    57.93534    -122.85   742.2209
     prewage |      5,605   -1475.958    133432.6   -9989325   1237.861
      totmed |      5,605    1145.916    2715.935          0   48112.54
         age |      5,601     34.2205    12.69781       -109         98

130 . count if benefit < 0 | prewage < 0 | age < 0
  5

131 . drop if benefit < 0 | prewage < 0 | age < 0
(5 observations deleted)

132 . count if benefit < 0 | prewage < 0 | age < 0
  0

133 . summarize durat benefit prewage totmed age if ky==1

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
       durat |      5,599    8.788215    21.27965   5.42e-20        182
     benefit |      5,600    150.6237    57.82518   2.21e-37   742.2209
     prewage |      5,600    306.5422    162.0262   9.526563   1237.861
      totmed |      5,600    1145.399     2716.71          0   48112.54
         age |      5,596    34.24392    12.55518          5         98

134 . summarize durat benefit prewage totmed age if ky==0

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
       durat |      1,522    13.27891    31.57231        .25        182
     benefit |      1,522    208.8087    53.20398    28.4958   473.0752
     prewage |      1,522    416.7323    224.2237     159.25     1583.1
      totmed |      1,522    1789.258    3991.734          0   44945.31
         age |      1,522    36.44021    12.62067         12         73
```

```
135 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
136 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
137 . save, replace
[redacted]

138 . log close
      name:  <unnamed>
[redacted]
  log type:  smcl
 closed on:  16 Oct 2025, 01:28:12
```

```
      name:  <unnamed>
[redacted]
  log type:  smcl
 opened on:  16 Oct 2025, 02:06:58

139 .
140 .
141 [redacted]
command DO is unrecognized
r(199);

end of do-file

r(199);
```

[redacted]

```
143 . ****************************************************
144 . [redacted]
145 . [redacted]
146 . [redacted]
147 . [redacted]
148 . [redacted]
149 . [redacted]
150 . [redacted]
151 . [redacted]
152 .
153 .
154 . *using data file:
```

[redacted]

r(199);

end of do-file

r(199);

[redacted]

```
157 . ****************************************************
158 . * Project: Injury Dataset Analysis
159 . * Purpose: Analyze how Kentucky and Michigan differ in how
160 . *          workers' compensation benefits affect the duration
161 . *          of injuries, allowing for different baseline durations
162 . *          by state.
163 . * Dataset: INJURY.DTA
164 . * Authors: Burton, Dejah; Akindale, Dammy; Del Aguila, Gus
165 . ****************************************************
166 .
167 . clear all
```

[redacted]

```
169 .
170 . * Start logging output (choose append or replace)
```

[redacted]

log file already open

r(604);

end of do-file

r(604);

[redacted]

```
173 . ****************************************************
174 . * Project: Injury Dataset Analysis
175 . * Purpose: Analyze how Kentucky and Michigan differ in how
176 . *          workers' compensation benefits affect the duration
```

```
177 . *          of injuries, allowing for different baseline durations
178 . *          by state.
179 . * Dataset: INJURY.DTA
[redacted]
181 . ******************************************************
182 .
183 . clear all
[redacted]

185 .
186 . * Start logging output (choose append or replace)
[redacted]
r(604);

end of do-file

r(604);
[redacted]
189 . ******************************************************
190 . * Project: Injury Dataset Analysis
191 . * Purpose: Analyze how Kentucky and Michigan differ in how
192 . *          workers' compensation benefits affect the duration
193 . *          of injuries, allowing for different baseline durations
194 . *          by state.
195 . * Dataset: INJURY.DTA
196 . * Authors: Burton, Dejah; Akindale, Dammy; Del Aguila, Gus
197 . ******************************************************
198 .
199 . clear all
[redacted]

201 .
202 . * Start logging output (choose append or replace)
[redacted]
log file already open
r(604);

end of do-file

r(604);

204 . log close
      name:  <unnamed>
[redacted]
  log type:  smcl
 closed on:  16 Oct 2025, 02:15:24
[redacted]
[redacted]
      name:  <unnamed>
[redacted]
  log type:  smcl
 opened on:  16 Oct 2025, 02:15:30
```

```
205 .
206 . * Load dataset
207 . use "INJURY.DTA", clear

208 .
209 . * Optional: browse data
210 . browse

211 .
212 . ******************************************************
213 . *                ANALYSIS SECTION
214 . ******************************************************
215 .
216 . br

217 . sum
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
afchnge	7,122	.4800618	1.945965	-127	65
highearn	7,122	.4276889	1.259329	0	64
male	7,106	.6771742	3.712077	-128	5
married	6,825	.6978755	.5225034	0	16
hosp	7,122	.2351867	2.241903	-128	32
indust	7,097	2.289136	1.937026	-127	67
injtype	7,122	4.478798	1.904447	1	71
age	7,118	34.71354	12.60055	5	98
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
injdes	7,122	4387.092	1333.947	1007	11732
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
ky	7,122	.786296	.409949	0	1
mi	7,122	.2076664	1.75616	-128	64
ldurat	7,122	1.327854	1.301852	-1.390204	5.204007
afhigh	7,122	.2080876	.8991886	0	65
lprewage	7,122	1.29e+16	1.09e+18	-5.08466	9.19e+19
lage	7,118	36.33313	2761.715	-2.995732	233003.3
ltotmed	7,122	3.48e+18	2.93e+20	-6.926684	2.47e+22
head	7,122	.0289245	1.623277	-128	32
neck	7,122	-.021904	2.7524	-128	64
upextr	7,122	.3073575	.805489	0	33
trunk	7,122	.0494243	3.595559	-128	64
lowback	7,122	.2684639	.5084177	0	16
lowextr	7,122	.2479641	.9774954	0	72
occdis	7,122	-.0004212	1.572701	-128	32
manuf	7,097	.2754685	2.497588	-127	65
construc	7,097	.1389319	1.634388	-128	33
highlpre	7,122	2.487598	3.05665	-7.957778	7.36714

```
218 . des

Contains data from INJURY.DTA
 Observations:         7,122
    Variables:            30                  16 Oct 2025 01:27
```

Variable name	Storage type	Display format	Value label	Variable label
durat	float	%9.0g		duration of benefits
afchnge	byte	%9.0g		=1 if after change in benefits
highearn	byte	%9.0g		=1 if high earner
male	byte	%9.0g		=1 if male
married	byte	%9.0g		=1 if married
hosp	byte	%9.0g		=1 if inj. required hosp. stay
indust	byte	%9.0g		industry
injtype	byte	%9.0g		type of injury
age	byte	%9.0g		age at time of injury
prewage	float	%9.0g		previous weekly wage, 1982 $
totmed	float	%9.0g		total med. costs, 1982 $
injdes	int	%9.0g		4 digit injury description
benefit	float	%9.0g		real dollar value of benefit
ky	byte	%9.0g		=1 for kentucky
mi	byte	%9.0g		=1 for michigan
ldurat	float	%9.0g		log(durat)
afhigh	byte	%9.0g		afchnge*highearn
lprewage	float	%9.0g		log(wage)
lage	float	%9.0g		log(age)
ltotmed	float	%9.0g		log(totmed); = 0 if totmed < 1
head	byte	%9.0g		=1 if head injury
neck	byte	%9.0g		=1 if neck injury
upextr	byte	%9.0g		=1 if upper extremities injury
trunk	byte	%9.0g		=1 if trunk injury
lowback	byte	%9.0g		=1 if lower back injury
lowextr	byte	%9.0g		=1 if lower extremities injury
occdis	byte	%9.0g		=1 if occupational disease
manuf	byte	%9.0g		=1 if manufacturing industry
construc	byte	%9.0g		=1 if construction industry
highlpre	float	%9.0g		highearn*lprewage

```
Sorted by: ky

219 .
220 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
221 . by ky, sort: summarize durat benefit prewage totmed age

-> ky = 0
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
222 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
223 . drop if ky > 1
(0 observations deleted)

224 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
225 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
226 .
227 . * 1. Keep only Kentucky (1) and Michigan (0)
228 . drop if ky > 1
    (0 observations deleted)

229 .
230 . * 2. Confirm cleanup
231 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
232 .
233 . * 3. Re-run Step 1: Overall summary stats
234 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
235 .
236 . * 4. Then re-run Step 2: By-state summary
237 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
238 .
239 . describe benefit prewage totmed

    Variable      Storage   Display    Value
        name         type    format    label      Variable label
    ------------------------------------------------------------------------------------------------------------------------
    benefit         float   %9.0g                 real dollar value of benefit
    prewage         float   %9.0g                 previous weekly wage, 1982 $
    totmed          float   %9.0g                 total med. costs, 1982 $

240 .
241 . list benefit prewage totmed if ky==1 & (benefit>10000 | prewage>10000 | totmed>10000) in 1/20

242 .
243 . list benefit if ky==1, clean sort(-benefit) in 1/10
    option sort() not allowed
    r(198);

    end of do-file

    r(198);

244 . sort benefit

245 .
246 . list benefit if ky==1 in -10/l, clean

             benefit
    7121.    502.775
    7122.   742.2209
```

[redacted]

```
248 . ******************************************************
249 . * Project: Injury Dataset Analysis
250 . * Purpose: Analyze how Kentucky and Michigan differ in how
251 . *          workers' compensation benefits affect the duration
252 . *          of injuries, allowing for different baseline durations
253 . *          by state.
254 . * Dataset: INJURY.DTA
255 . * Authors: Burton, Dejah; Akindale, Dammy; Del Aguila, Gus
256 . ******************************************************
257 .
258 . clear all
```

[redacted]

```
260 .
261 . * Start logging output (choose append or replace)
```

[redacted]

```
    r(604);

    end of do-file

    r(604);
```

```
263 . log close
      name:  <unnamed>
       log:  [redacted]
  log type:  smcl
 closed on:  16 Oct 2025, 02:20:32
-------------------------------------------------------------------------------

-------------------------------------------------------------------------------
      name:  <unnamed>
       log:  [redacted]
  log type:  smcl
 opened on:  16 Oct 2025, 02:20:38

264 .
265 . * Load dataset
266 . use "INJURY.DTA", clear

267 .
268 . * Optional: browse data
269 . browse

270 .
271 . ****************************************************
272 . *                ANALYSIS SECTION
273 . ****************************************************
274 .
275 .
276 . * View data (optional)
277 . browse

278 .
279 . * Basic summaries
280 . summarize durat benefit prewage totmed age

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
       durat |      7,121    9.748029    23.92401   5.42e-20        182
     benefit |      7,122    163.0581    61.66563   2.21e-37   742.2209
     prewage |      7,122    330.0903    182.8132   9.526563     1583.1
      totmed |      7,122    1282.995     3045.67          0   48112.54
         age |      7,118    34.71354    12.60055          5         98

281 . by ky, sort: summarize durat benefit prewage totmed age

-------------------------------------------------------------------------------
-> ky = 0

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
       durat |      1,522    13.27891    31.57231        .25        182
     benefit |      1,522    208.8087    53.20398    28.4958   473.0752
     prewage |      1,522    416.7323    224.2237     159.25     1583.1
      totmed |      1,522    1789.258    3991.734          0   44945.31
         age |      1,522    36.44021    12.62067         12         73

-------------------------------------------------------------------------------
-> ky = 1

    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
       durat |      5,599    8.788215    21.27965   5.42e-20        182
     benefit |      5,600    150.6237    57.82518   2.21e-37   742.2209
     prewage |      5,600    306.5422    162.0262   9.526563   1237.861
      totmed |      5,600    1145.399     2716.71          0   48112.54
         age |      5,596    34.24392    12.55518          5         98
```

```
282 .
283 . * Check state variable
284 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
285 .
286 . * Keep only Kentucky (1) and Michigan (0)
287 . drop if ky > 1
(0 observations deleted)

288 .
289 . * Confirm cleanup
290 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
291 .
292 . * Summary stats after cleaning
293 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
294 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
295 .
296 . * Describe key variables
297 . describe benefit prewage totmed

    Variable      Storage   Display    Value
        name         type    format    label      Variable label
    ------------------------------------------------------------------------------------------------------------------------
    benefit         float   %9.0g                 real dollar value of benefit
    prewage         float   %9.0g                 previous weekly wage, 1982 $
    totmed          float   %9.0g                 total med. costs, 1982 $

298 .
299 . * Identify potential outliers for Kentucky
300 . list benefit prewage totmed if ky==1 & (benefit>10000 | prewage>10000 | totmed>10000) in 1/20

301 .
302 . ******************************************************
303 . * Inspect Top 10 Largest Values by Category
304 . ******************************************************
305 .
306 . * Top 10 Benefits (descending)
307 . gsort -benefit

308 . list benefit if ky==1 in 1/10, clean

           benefit
      1.   742.2209
      2.    502.775

309 .
310 . * Top 10 Prewages (descending)
311 . gsort -prewage

312 . list prewage if ky==1 in 1/10, clean

           prewage
      2.   1237.861
      3.   1153.602

313 .
314 . * Top 10 Total Medical Costs (descending)
315 . gsort -totmed

316 . list totmed if ky==1 in 1/10, clean

             totmed
      1.   48112.54
      2.   45017.59
      5.   41441.56
      6.   40831.17
      7.   38980.07
      8.   38961.04
      9.   34953.11

317 .
```

```
318 . * Restore sorting by state
319 . sort ky

320 .
321 . ******************************************************
322 . * Outlier Removal and Validation
323 . ******************************************************
324 .
325 . * Drop large outliers
326 . drop if benefit > 10000 | prewage > 10000 | totmed > 50000
(0 observations deleted)

327 .
328 . * Kentucky summary
329 . summarize durat benefit prewage totmed age if ky==1
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
330 .
331 . * Check for invalid (negative) values
332 . count if benefit < 0 | prewage < 0 | age < 0
  0

333 . drop if benefit < 0 | prewage < 0 | age < 0
(0 observations deleted)

334 . count if benefit < 0 | prewage < 0 | age < 0
  0

335 .
336 . * Michigan summary
337 . summarize durat benefit prewage totmed age if ky==0
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

```
338 .
339 . * Combined summary
340 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
341 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
342 .
343 . ****************************************************
344 . * Save and Close
345 . ****************************************************
346 .
347 . save, replace
file INJURY.DTA saved as .dta format

348 . log close
      name:  <unnamed>
       log:  [redacted]
  log type:  [redacted]
 closed on:  16 Oct 2025, 02:20:38
```

```
      name:  [redacted]
       log:  [redacted]
  log type:  smcl
 opened on:  16 Oct 2025, 02:21:51

349 .
350 . * Load dataset
351 . use "INJURY.DTA", clear

352 .
353 . * Optional: browse data
354 . browse

355 .
356 . ****************************************************
```

```
357 . *                ANALYSIS SECTION
358 . ****************************************************
359 .
360 .
361 . * View data
362 . br

363 .
364 . * Basic summaries
365 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
366 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
367 .
368 . * Check state variable
369 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
370 .
    end of do-file

371 . do "C:\Users\USER\AppData\Local\Temp\STD3a84_000001.tmp"

372 . ****************************************************
373 . * Project: Injury Dataset Analysis
374 . * Purpose: Analyze how Kentucky and Michigan differ in how
375 . *          workers' compensation benefits affect the duration
376 . *          of injuries, allowing for different baseline durations
377 . *          by state.
378 . * Dataset: INJURY.DTA
379 . * Authors: Burton, Dejah; Akindale, Dammy; Del Aguila, Gus
380 . ****************************************************
381 .
382 . clear all
[redacted]

384 .
385 . * Start logging output (choose append or replace)
[redacted]
    r(604);

    end of do-file

    r(604);

387 . log close
      name:  <unnamed>
[redacted]
  log type:  smcl
 closed on:  16 Oct 2025, 02:24:07
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
      name:  <unnamed>
[redacted]
  log type:  smcl
 opened on:  16 Oct 2025, 02:24:12

388 .
389 . * Load dataset
390 . use "INJURY.DTA", clear

391 .
392 . *View data
393 . br

394 . sum
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
afchnge	7,122	.4800618	1.945965	-127	65
highearn	7,122	.4276889	1.259329	0	64
male	7,106	.6771742	3.712077	-128	5
married	6,825	.6978755	.5225034	0	16
hosp	7,122	.2351867	2.241903	-128	32
indust	7,097	2.289136	1.937026	-127	67
injtype	7,122	4.478798	1.904447	1	71
age	7,118	34.71354	12.60055	5	98
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54

injdes	7,122	4387.092	1333.947	1007	11732
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
ky	7,122	.786296	.409949	0	1
mi	7,122	.2076664	1.75616	-128	64
ldurat	7,122	1.327854	1.301852	-1.390204	5.204007
afhigh	7,122	.2080876	.8991886	0	65
lprewage	7,122	1.29e+16	1.09e+18	-5.08466	9.19e+19
lage	7,118	36.33313	2761.715	-2.995732	233003.3
ltotmed	7,122	3.48e+18	2.93e+20	-6.926684	2.47e+22
head	7,122	.0289245	1.623277	-128	32
neck	7,122	-.021904	2.7524	-128	64
upextr	7,122	.3073575	.805489	0	33
trunk	7,122	.0494243	3.595559	-128	64
lowback	7,122	.2684639	.5084177	0	16
lowextr	7,122	.2479641	.9774954	0	72
occdis	7,122	-.0004212	1.572701	-128	32
manuf	7,097	.2754685	2.497588	-127	65
construc	7,097	.1389319	1.634388	-128	33
highlpre	7,122	2.487598	3.05665	-7.957778	7.36714

395 . des

Contains data from **INJURY.DTA**
 Observations: **7,122**
    Variables: **30** **16 Oct 2025 02:20**

Variable name	Storage type	Display format	Value label	Variable label
durat	float	%9.0g		**duration of benefits**
afchnge	byte	%9.0g		**=1 if after change in benefits**
highearn	byte	%9.0g		**=1 if high earner**
male	byte	%9.0g		**=1 if male**
married	byte	%9.0g		**=1 if married**
hosp	byte	%9.0g		**=1 if inj. required hosp. stay**
indust	byte	%9.0g		**industry**
injtype	byte	%9.0g		**type of injury**
age	byte	%9.0g		**age at time of injury**
prewage	float	%9.0g		**previous weekly wage, 1982 $**
totmed	float	%9.0g		**total med. costs, 1982 $**
injdes	int	%9.0g		**4 digit injury description**
benefit	float	%9.0g		**real dollar value of benefit**
ky	byte	%9.0g		**=1 for kentucky**
mi	byte	%9.0g		**=1 for michigan**
ldurat	float	%9.0g		**log(durat)**
afhigh	byte	%9.0g		**afchnge*highearn**
lprewage	float	%9.0g		**log(wage)**
lage	float	%9.0g		**log(age)**
ltotmed	float	%9.0g		**log(totmed); = 0 if totmed < 1**
head	byte	%9.0g		**=1 if head injury**
neck	byte	%9.0g		**=1 if neck injury**
upextr	byte	%9.0g		**=1 if upper extremities injury**
trunk	byte	%9.0g		**=1 if trunk injury**
lowback	byte	%9.0g		**=1 if lower back injury**
lowextr	byte	%9.0g		**=1 if lower extremities injury**
occdis	byte	%9.0g		**=1 if occupational disease**
manuf	byte	%9.0g		**=1 if manufacturing industry**
construc	byte	%9.0g		**=1 if construction industry**
highlpre	float	%9.0g		**highearn*lprewage**

Sorted by: **ky**

```
. 
. 
. ******************************************************
. *                ANALYSIS SECTION
. ******************************************************
. 
. 
. * View data
. br

. 
. * Basic summaries
. summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
. by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
. 
. * Check state variable
. tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
412 .
    end of do-file

413 . log close
          name:  <unnamed>
      log type:  smcl
     closed on:  16 Oct 2025, 02:26:44
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
          name:  <unnamed>
      log type:  smcl
     opened on:  16 Oct 2025, 02:35:22

414 .
415 . * Load dataset
416 . use "INJURY.DTA", clear

417 .
418 . *View data
419 . br

420 . sum
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
afchnge	7,122	.4800618	1.945965	-127	65
highearn	7,122	.4276889	1.259329	0	64
male	7,106	.6771742	3.712077	-128	5
married	6,825	.6978755	.5225034	0	16
hosp	7,122	.2351867	2.241903	-128	32
indust	7,097	2.289136	1.937026	-127	67
injtype	7,122	4.478798	1.904447	1	71
age	7,118	34.71354	12.60055	5	98
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
injdes	7,122	4387.092	1333.947	1007	11732
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
ky	7,122	.786296	.409949	0	1
mi	7,122	.2076664	1.75616	-128	64
ldurat	7,122	1.327854	1.301852	-1.390204	5.204007
afhigh	7,122	.2080876	.8991886	0	65
lprewage	7,122	1.29e+16	1.09e+18	-5.08466	9.19e+19
lage	7,118	36.33313	2761.715	-2.995732	233003.3
ltotmed	7,122	3.48e+18	2.93e+20	-6.926684	2.47e+22
head	7,122	.0289245	1.623277	-128	32
neck	7,122	-.021904	2.7524	-128	64
upextr	7,122	.3073575	.805489	0	33
trunk	7,122	.0494243	3.595559	-128	64
lowback	7,122	.2684639	.5084177	0	16
lowextr	7,122	.2479641	.9774954	0	72
occdis	7,122	-.0004212	1.572701	-128	32
manuf	7,097	.2754685	2.497588	-127	65
construc	7,097	.1389319	1.634388	-128	33
highlpre	7,122	2.487598	3.05665	-7.957778	7.36714

```
421 . des

Contains data from INJURY.DTA
 Observations:         7,122
    Variables:            30                  16 Oct 2025 02:20
```

Variable name	Storage type	Display format	Value label	Variable label
durat	float	%9.0g		duration of benefits
afchnge	byte	%9.0g		=1 if after change in benefits
highearn	byte	%9.0g		=1 if high earner
male	byte	%9.0g		=1 if male
married	byte	%9.0g		=1 if married
hosp	byte	%9.0g		=1 if inj. required hosp. stay
indust	byte	%9.0g		industry
injtype	byte	%9.0g		type of injury
age	byte	%9.0g		age at time of injury
prewage	float	%9.0g		previous weekly wage, 1982 $
totmed	float	%9.0g		total med. costs, 1982 $
injdes	int	%9.0g		4 digit injury description
benefit	float	%9.0g		real dollar value of benefit
ky	byte	%9.0g		=1 for kentucky
mi	byte	%9.0g		=1 for michigan
ldurat	float	%9.0g		log(durat)
afhigh	byte	%9.0g		afchnge*highearn
lprewage	float	%9.0g		log(wage)
lage	float	%9.0g		log(age)
ltotmed	float	%9.0g		log(totmed); = 0 if totmed < 1
head	byte	%9.0g		=1 if head injury
neck	byte	%9.0g		=1 if neck injury
upextr	byte	%9.0g		=1 if upper extremities injury
trunk	byte	%9.0g		=1 if trunk injury
lowback	byte	%9.0g		=1 if lower back injury
lowextr	byte	%9.0g		=1 if lower extremities injury
occdis	byte	%9.0g		=1 if occupational disease
manuf	byte	%9.0g		=1 if manufacturing industry
construc	byte	%9.0g		=1 if construction industry
highlpre	float	%9.0g		highearn*lprewage

```
Sorted by: ky

422 .
423 .
424 . *****************************************************
425 . *                ANALYSIS SECTION
426 . *****************************************************
427 .
428 .
429 . * View data
430 . br

431 .
432 . * Basic summaries
433 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
434 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
435 .
436 . * Check state variable
437 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
438 .
439 . * Keep only Kentucky (1) and Michigan (0)
440 . drop if ky > 1
    (0 observations deleted)

441 .
442 . * Confirm cleanup
443 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
444 .
```

```
445 . * Summary stats after cleaning
446 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
447 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
448 .
449 . * Describe key variables
450 . describe benefit prewage totmed
```

Variable name	Storage type	Display format	Value label	Variable label
benefit	float	%9.0g		**real dollar value of benefit**
prewage	float	%9.0g		**previous weekly wage, 1982 $**
totmed	float	%9.0g		**total med. costs, 1982 $**

```
451 .
452 . * Identify potential outliers for Kentucky
453 . list benefit prewage totmed if ky==1 & (benefit>10000 | prewage>10000 | totmed>10000) in 1/20

454 .
455 . ******************************************************
456 . * Inspect Top 10 Largest Values by Category
457 . ******************************************************
```

```
458 .
459 . * Top 10 Benefits (descending)
460 . gsort -benefit

461 . list benefit if ky==1 in 1/10, clean

           benefit
      1.   742.2209
      2.    502.775

462 .
463 . * Top 10 Prewages (descending)
464 . gsort -prewage

465 . list prewage if ky==1 in 1/10, clean

           prewage
      2.   1237.861
      3.   1153.602

466 .
467 . * Top 10 Total Medical Costs (descending)
468 . gsort -totmed

469 . list totmed if ky==1 in 1/10, clean

            totmed
      1.   48112.54
      2.   45017.59
      5.   41441.56
      6.   40831.17
      7.   38980.07
      8.   38961.04
      9.   34953.11

470 .
471 . * Restore sorting by state
472 . sort ky

473 .
474 . ******************************************************
475 . * Outlier Removal and Validation
476 . ******************************************************
477 .
478 .
479 . * --- Review large outliers before dropping ---
480 . list ky benefit prewage totmed age if benefit > 10000 | prewage > 10000 | totmed > 50000, clean

481 . count if benefit > 10000 | prewage > 10000 | totmed > 50000
      0

482 .
483 . * --- Drop the outliers ---
484 . drop if benefit > 10000 | prewage > 10000 | totmed > 50000
    (0 observations deleted)
```

```
485 .
486 . * --- Confirm they are gone ---
487 . count if benefit > 10000 | prewage > 10000 | totmed > 50000
      0

488 .
489 .
490 . ******************************************************
491 . * Check for Negative or Invalid Values
492 . ******************************************************
493 .
494 . * --- Review negatives before dropping ---
495 . list ky benefit prewage age if benefit < 0 | prewage < 0 | age < 0, clean

496 . count if benefit < 0 | prewage < 0 | age < 0
      0

497 .
498 . * --- Drop them and confirm ---
499 . drop if benefit < 0 | prewage < 0 | age < 0
    (0 observations deleted)

500 . count if benefit < 0 | prewage < 0 | age < 0
      0

501 .
502 .
503 . ******************************************************
504 . * Post-Cleanup Summaries
505 . ******************************************************
506 .
507 . * Kentucky summary
508 . summarize durat benefit prewage totmed age if ky==1
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
509 .
510 . * Michigan summary
511 . summarize durat benefit prewage totmed age if ky==0
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

```
512 .
```

```
513 . * Combined summary
514 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
515 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
516 .
517 .
518 . ****************************************************
519 . * Save and Close
520 . ****************************************************
521 .
522 . save, replace
file INJURY.DTA saved as .dta format

523 . log close
      name:  <unnamed>
       log:  [redacted]
  log type:  smcl
 closed on:  16 Oct 2025, 02:35:23
```

```
      name:  <unnamed>
       log:  [redacted]
  log type:  smcl
 opened on:  18 Oct 2025, 10:30:43
```

```
524 .
525 . * Load dataset
526 . use "INJURY.DTA", clear

527 .
528 . *View data
529 . br

530 . sum
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
afchnge	7,122	.4800618	1.945965	-127	65
highearn	7,122	.4276889	1.259329	0	64
male	7,106	.6771742	3.712077	-128	5
married	6,825	.6978755	.5225034	0	16
hosp	7,122	.2351867	2.241903	-128	32
indust	7,097	2.289136	1.937026	-127	67
injtype	7,122	4.478798	1.904447	1	71
age	7,118	34.71354	12.60055	5	98
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
injdes	7,122	4387.092	1333.947	1007	11732
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
ky	7,122	.786296	.409949	0	1
mi	7,122	.2076664	1.75616	-128	64
ldurat	7,122	1.327854	1.301852	-1.390204	5.204007
afhigh	7,122	.2080876	.8991886	0	65
lprewage	7,122	1.29e+16	1.09e+18	-5.08466	9.19e+19
lage	7,118	36.33313	2761.715	-2.995732	233003.3
ltotmed	7,122	3.48e+18	2.93e+20	-6.926684	2.47e+22
head	7,122	.0289245	1.623277	-128	32
neck	7,122	-.021904	2.7524	-128	64
upextr	7,122	.3073575	.805489	0	33
trunk	7,122	.0494243	3.595559	-128	64
lowback	7,122	.2684639	.5084177	0	16
lowextr	7,122	.2479641	.9774954	0	72
occdis	7,122	-.0004212	1.572701	-128	32
manuf	7,097	.2754685	2.497588	-127	65
construc	7,097	.1389319	1.634388	-128	33
highlpre	7,122	2.487598	3.05665	-7.957778	7.36714

```
531 . des

Contains data from INJURY.DTA
 Observations:         7,122
    Variables:            30                  16 Oct 2025 02:35
```

Variable name	Storage type	Display format	Value label	Variable label
durat	float	%9.0g		duration of benefits
afchnge	byte	%9.0g		=1 if after change in benefits
highearn	byte	%9.0g		=1 if high earner
male	byte	%9.0g		=1 if male
married	byte	%9.0g		=1 if married
hosp	byte	%9.0g		=1 if inj. required hosp. stay
indust	byte	%9.0g		industry
injtype	byte	%9.0g		type of injury
age	byte	%9.0g		age at time of injury
prewage	float	%9.0g		previous weekly wage, 1982 $

totmed	float	%9.0g	**total med. costs, 1982 $**
injdes	int	%9.0g	**4 digit injury description**
benefit	float	%9.0g	**real dollar value of benefit**
ky	byte	%9.0g	**=1 for kentucky**
mi	byte	%9.0g	**=1 for michigan**
ldurat	float	%9.0g	**log(durat)**
afhigh	byte	%9.0g	**afchnge*highearn**
lprewage	float	%9.0g	**log(wage)**
lage	float	%9.0g	**log(age)**
ltotmed	float	%9.0g	**log(totmed); = 0 if totmed < 1**
head	byte	%9.0g	**=1 if head injury**
neck	byte	%9.0g	**=1 if neck injury**
upextr	byte	%9.0g	**=1 if upper extremities injury**
trunk	byte	%9.0g	**=1 if trunk injury**
lowback	byte	%9.0g	**=1 if lower back injury**
lowextr	byte	%9.0g	**=1 if lower extremities injury**
occdis	byte	%9.0g	**=1 if occupational disease**
manuf	byte	%9.0g	**=1 if manufacturing industry**
construc	byte	%9.0g	**=1 if construction industry**
highlpre	float	%9.0g	**highearn*lprewage**

Sorted by: **ky**

```
532 .
533 .
534 . *****************************************************
535 . *                ANALYSIS SECTION
536 . *****************************************************
537 .
538 .
539 . * View data
540 . br

541 .
542 . * Basic summaries
543 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	**7,121**	**9.748029**	**23.92401**	**5.42e-20**	**182**
benefit	**7,122**	**163.0581**	**61.66563**	**2.21e-37**	**742.2209**
prewage	**7,122**	**330.0903**	**182.8132**	**9.526563**	**1583.1**
totmed	**7,122**	**1282.995**	**3045.67**	**0**	**48112.54**
age	**7,118**	**34.71354**	**12.60055**	**5**	**98**

```
544 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	**1,522**	**13.27891**	**31.57231**	**.25**	**182**
benefit	**1,522**	**208.8087**	**53.20398**	**28.4958**	**473.0752**
prewage	**1,522**	**416.7323**	**224.2237**	**159.25**	**1583.1**
totmed	**1,522**	**1789.258**	**3991.734**	**0**	**44945.31**
age	**1,522**	**36.44021**	**12.62067**	**12**	**73**

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
545 .
546 . * Check state variable
547 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
548 .
549 . * Keep only Kentucky (1) and Michigan (0)
550 . drop if ky > 1
    (0 observations deleted)

551 .
552 . * Confirm cleanup
553 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
554 .
555 . * Summary stats after cleaning
556 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
557 . by ky, sort: summarize durat benefit prewage totmed age
```

```
-> ky = 0
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

```
-> ky = 1
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	**5,599**	**8.788215**	**21.27965**	**5.42e-20**	**182**
benefit	**5,600**	**150.6237**	**57.82518**	**2.21e-37**	**742.2209**
prewage	**5,600**	**306.5422**	**162.0262**	**9.526563**	**1237.861**
totmed	**5,600**	**1145.399**	**2716.71**	**0**	**48112.54**
age	**5,596**	**34.24392**	**12.55518**	**5**	**98**

```
558 .
559 . * Describe key variables
560 . describe benefit prewage totmed
```

Variable name	Storage type	Display format	Value label	Variable label
benefit	float	%9.0g		**real dollar value of benefit**
prewage	float	%9.0g		**previous weekly wage, 1982 $**
totmed	float	%9.0g		**total med. costs, 1982 $**

```
561 .
562 . * Identify potential outliers for Kentucky
563 . list benefit prewage totmed if ky==1 & (benefit>10000 | prewage>10000 | totmed>10000) in 1/20

564 .
565 . *******************************************************
566 . * Inspect Top 10 Largest Values by Category
567 . *******************************************************
568 .
569 . * Top 10 Benefits (descending)
570 . gsort -benefit

571 . list benefit if ky==1 in 1/10, clean

          benefit
  1.   742.2209
  2.    502.775

572 .
573 . * Top 10 Prewages (descending)
574 . gsort -prewage

575 . list prewage if ky==1 in 1/10, clean

          prewage
  2.   1237.861
  3.   1153.602

576 .
577 . * Top 10 Total Medical Costs (descending)
578 . gsort -totmed

579 . list totmed if ky==1 in 1/10, clean

           totmed
  1.   48112.54
  2.   45017.59
  5.   41441.56
  6.   40831.17
  7.   38980.07
  8.   38961.04
  9.   34953.11
```

```
580 .
581 . * Restore sorting by state
582 . sort ky

583 .
584 . ******************************************************
585 . * Outlier Removal and Validation
586 . ******************************************************
587 .
588 .
589 . * --- Review large outliers before dropping ---
590 . list ky benefit prewage totmed age if benefit > 10000 | prewage > 10000 | totmed > 50000, clean

591 . count if benefit > 10000 | prewage > 10000 | totmed > 50000
      0

592 .
593 . * --- Drop the outliers ---
594 . drop if benefit > 10000 | prewage > 10000 | totmed > 50000
    (0 observations deleted)

595 .
596 . * --- Confirm they are gone ---
597 . count if benefit > 10000 | prewage > 10000 | totmed > 50000
      0

598 .
599 .
600 . ******************************************************
601 . * Check for Negative or Invalid Values
602 . ******************************************************
603 .
604 . * --- Review negatives before dropping ---
605 . list ky benefit prewage age if benefit < 0 | prewage < 0 | age < 0, clean

606 . count if benefit < 0 | prewage < 0 | age < 0
      0

607 .
608 . * --- Drop them and confirm ---
609 . drop if benefit < 0 | prewage < 0 | age < 0
    (0 observations deleted)

610 . count if benefit < 0 | prewage < 0 | age < 0
      0

611 .
612 .
613 . ******************************************************
614 . * Post-Cleanup Summaries
615 . ******************************************************
616 .
617 . * Kentucky summary
618 . summarize durat benefit prewage totmed age if ky==1
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
619 .
620 . * Michigan summary
621 . summarize durat benefit prewage totmed age if ky==0
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

```
622 .
623 . * Combined summary
624 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
625 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
626 .
627 .
628 . ****************************************************
629 . * Save and Close
630 . ****************************************************
631 .
```

```
632 . save, replace
    file INJURY.DTA saved as .dta format

633 . log close
          name:  <unnamed>
           log:  [redacted]
      log type:  smcl
     closed on:  18 Oct 2025, 10:30:53
-------------------------------------------------------------------------------

-------------------------------------------------------------------------------
          name:  <unnamed>
           log:  [redacted]
      log type:  smcl
     opened on:   2 Nov 2025, 07:01:51

634 . sum
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
afchnge	7,122	.4800618	1.945965	-127	65
highearn	7,122	.4276889	1.259329	0	64
male	7,106	.6771742	3.712077	-128	5
married	6,825	.6978755	.5225034	0	16
hosp	7,122	.2351867	2.241903	-128	32
indust	7,097	2.289136	1.937026	-127	67
injtype	7,122	4.478798	1.904447	1	71
age	7,118	34.71354	12.60055	5	98
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
injdes	7,122	4387.092	1333.947	1007	11732
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
ky	7,122	.786296	.409949	0	1
mi	7,122	.2076664	1.75616	-128	64
ldurat	7,122	1.327854	1.301852	-1.390204	5.204007
afhigh	7,122	.2080876	.8991886	0	65
lprewage	7,122	1.29e+16	1.09e+18	-5.08466	9.19e+19
lage	7,118	36.33313	2761.715	-2.995732	233003.3
ltotmed	7,122	3.48e+18	2.93e+20	-6.926684	2.47e+22
head	7,122	.0289245	1.623277	-128	32
neck	7,122	-.021904	2.7524	-128	64
upextr	7,122	.3073575	.805489	0	33
trunk	7,122	.0494243	3.595559	-128	64
lowback	7,122	.2684639	.5084177	0	16
lowextr	7,122	.2479641	.9774954	0	72
occdis	7,122	-.0004212	1.572701	-128	32
manuf	7,097	.2754685	2.497588	-127	65
construc	7,097	.1389319	1.634388	-128	33
highlpre	7,122	2.487598	3.05665	-7.957778	7.36714

```
635 . br

636 . des
```

[redacted]

```
 Observations:          7,122
    Variables:             30                  18 Oct 2025 10:30
-------------------------------------------------------------------------------
Variable      Storage   Display    Value
    name         type    format    label      Variable label
-------------------------------------------------------------------------------
durat           float   %9.0g                 duration of benefits
afchnge         byte    %9.0g                 =1 if after change in benefits
highearn        byte    %9.0g                 =1 if high earner
male            byte    %9.0g                 =1 if male
married         byte    %9.0g                 =1 if married
hosp            byte    %9.0g                 =1 if inj. required hosp. stay
indust          byte    %9.0g                 industry
injtype         byte    %9.0g                 type of injury
age             byte    %9.0g                 age at time of injury
prewage         float   %9.0g                 previous weekly wage, 1982 $
totmed          float   %9.0g                 total med. costs, 1982 $
injdes          int     %9.0g                 4 digit injury description
benefit         float   %9.0g                 real dollar value of benefit
ky              byte    %9.0g                 =1 for kentucky
mi              byte    %9.0g                 =1 for michigan
ldurat          float   %9.0g                 log(durat)
afhigh          byte    %9.0g                 afchnge*highearn
lprewage        float   %9.0g                 log(wage)
lage            float   %9.0g                 log(age)
ltotmed         float   %9.0g                 log(totmed); = 0 if totmed < 1
head            byte    %9.0g                 =1 if head injury
neck            byte    %9.0g                 =1 if neck injury
upextr          byte    %9.0g                 =1 if upper extremities injury
trunk           byte    %9.0g                 =1 if trunk injury
lowback         byte    %9.0g                 =1 if lower back injury
lowextr         byte    %9.0g                 =1 if lower extremities injury
occdis          byte    %9.0g                 =1 if occupational disease
manuf           byte    %9.0g                 =1 if manufacturing industry
construc        byte    %9.0g                 =1 if construction industry
highlpre        float   %9.0g                 highearn*lprewage
-------------------------------------------------------------------------------
Sorted by: ky

637 . * Make sure we're on KY (1) vs MI (0) only

638 .
639 . drop if ky>1
(0 observations deleted)

640 . histogram durat, by(ky) width(2) percent ///
option / not allowed
r(198);

641 .
```

```
642 .     title("Injury Duration by State") name(h_durat, replace)
    command title is unrecognized
    r(199);

643 .
644 . * graph export "hist_durat.png", width(1400) replace

645 . histogram durat, by(ky) width(2) percent ///
    option / not allowed
    r(198);

646 .
647 .     title("Injury Duration by State") ///
    command title is unrecognized
    r(199);

648 .
649 .     name(h_durat, replace)
    command name is unrecognized
    r(199);

650 . histogram durat, by(ky) width(2) percent
```

[redacted]

```
652 .  histogram durat, by(ky) width(2) percent

653 .
654 .
655 . histogram benefit, by(ky) percent

656 . histogram prewage, by(ky) percent

657 . histogram totmed, by(ky) percent

658 . histogram age, by(ky) percent

659 . twoway (scatter durat benefit if ky==1, msymbol(o)) ///
    / / / is not a twoway plot type
    r(198);

660 .
661 .        (scatter durat benefit if ky==0, msymbol(triangle)) ///
    ( is not a valid command name
    r(199);

662 .
663 .        (lfit durat benefit if ky==1) ///
    ( is not a valid command name
    r(199);

664 .
665 .        (lfit durat benefit if ky==0)
    ( is not a valid command name
    r(199);
```

```
666 . twoway (scatter durat benefit if ky==1, msymbol(o)) ///
/ / / is not a twoway plot type
r(198);

667 .
668 .       (scatter durat benefit if ky==0, msymbol(triangle)) ///
( is not a valid command name
r(199);

669 .
670 .       (lfit durat benefit if ky==1) ///
( is not a valid command name
r(199);

671 .
672 .       (lfit durat benefit if ky==0)
( is not a valid command name
r(199);

673 . twoway (scatter durat benefit if ky==1, msymbol(o)) (scatter durat benefit if ky==0, msymbol(triangle)) (lfit durat be

674 . twoway (scatter durat prewage if ky==1, msymbol(o)) (scatter durat prewage if ky==0, msymbol(triangle)) (lfit durat pr

675 . twoway (scatter durat totmed if ky==1, msymbol(o)) (scatter durat totmed if ky==0, msymbol(triangle)) (lfit durat totm

676 . twoway (scatter durat age if ky==1, msymbol(o)) (scatter durat age if ky==0, msymbol(triangle)) (lfit durat age if ky=

677 . reg durat benefit ky c.benefit#i.ky prewage totmed age c.age#c.age

      Source |       SS           df       MS      Number of obs   =     7,117
-------------+----------------------------------   F(7, 7109)      =    817.46
       Model |  1817247.64         7  259606.806   Prob > F        =    0.0000
    Residual |  2257669.12     7,109  317.579001   R-squared       =    0.4460
-------------+----------------------------------   Adj R-squared   =    0.4454
       Total |  4074916.76     7,116  572.641478   Root MSE        =    17.821

------------------------------------------------------------------------------
       durat | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
     benefit |   .0018882   .0098464     0.19   0.848    -.0174138    .0211901
          ky |  -2.530766   2.004367    -1.26   0.207    -6.459922     1.39839
             |
  ky#c.benefit |
           1 |   .0118596   .0097179     1.22   0.222    -.0071905    .0309096
             |
     prewage |   .0017802   .0016378     1.09   0.277    -.0014304    .0049908
      totmed |   .0051659   .0000703    73.50   0.000     .0050281    .0053037
         age |  -.0212881   .1014542    -0.21   0.834    -.2201685    .1775923
             |
 c.age#c.age |   .0010247   .0012683     0.81   0.419    -.0014615    .0035109
             |
       _cons |   2.151544   2.567062     0.84   0.402    -2.880661    7.183749
------------------------------------------------------------------------------

678 .
```

679 . vif

Variable	VIF	1/VIF
benefit	8.26	0.121093
ky	15.14	0.066066
ky#c.benefit		
1	13.64	0.073326
prewage	2.01	0.497699
totmed	1.03	0.973273
age	36.62	0.027308
c.age#c.age	36.11	0.027697
Mean VIF	16.11	

680 . reg durat benefit ky c.benefit#i.ky prewage totmed age c.age#c.age

Source	SS	df	MS		
				Number of obs	= 7,117
				F(7, 7109)	= 817.46
Model	1817247.64	7	259606.806	Prob > F	= 0.0000
Residual	2257669.12	7,109	317.579001	R-squared	= 0.4460
				Adj R-squared	= 0.4454
Total	4074916.76	7,116	572.641478	Root MSE	= 17.821

durat	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
benefit	.0018882	.0098464	0.19	0.848	-.0174138	.0211901
ky	-2.530766	2.004367	-1.26	0.207	-6.459922	1.39839
ky#c.benefit						
1	.0118596	.0097179	1.22	0.222	-.0071905	.0309096
prewage	.0017802	.0016378	1.09	0.277	-.0014304	.0049908
totmed	.0051659	.0000703	73.50	0.000	.0050281	.0053037
age	-.0212881	.1014542	-0.21	0.834	-.2201685	.1775923
c.age#c.age	.0010247	.0012683	0.81	0.419	-.0014615	.0035109
_cons	2.151544	2.567062	0.84	0.402	-2.880661	7.183749

681 .
682 . vif

Variable	VIF	1/VIF
benefit	8.26	0.121093
ky	15.14	0.066066
ky#c.benefit		
1	13.64	0.073326
prewage	2.01	0.497699
totmed	1.03	0.973273
age	36.62	0.027308
c.age#c.age	36.11	0.027697
Mean VIF	16.11	

```
683 . estat hettest

    Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
    Assumption: Normal error terms
    Variable: Fitted values of durat

    H0: Constant variance

        chi2(1) = 25689.84
    Prob > chi2 =   0.0000

684 . reg durat benefit ky c.benefit#i.ky prewage totmed age c.age#c.age, robust

    Linear regression                               Number of obs     =      7,117
                                                    F(7, 7109)        =      76.61
                                                    Prob > F          =     0.0000
                                                    R-squared         =     0.4460
                                                    Root MSE          =     17.821

------------------------------------------------------------------------------
             |               Robust
       durat |  Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
     benefit |   .0018882   .0145426     0.13   0.897    -.0266196     .030396
          ky |  -2.530766   2.775851    -0.91   0.362     -7.97226    2.910728
             |
ky#c.benefit |
          1  |   .0118596   .0138756     0.85   0.393    -.0153406    .0390598
             |
     prewage |   .0017802   .0020161     0.88   0.377    -.0021721    .0057324
      totmed |   .0051659   .0003044    16.97   0.000     .0045693    .0057625
         age |  -.0212881   .0970012    -0.22   0.826    -.2114393     .168863
             |
 c.age#c.age |   .0010247   .0012897     0.79   0.427    -.0015034    .0035529
             |
       _cons |   2.151544   3.112402     0.69   0.489     -3.94969    8.252778
------------------------------------------------------------------------------

685 . reg durat benefit ky c.benefit#i.ky prewage totmed age c.age#c.age, robust

    Linear regression                               Number of obs     =      7,117
                                                    F(7, 7109)        =      76.61
                                                    Prob > F          =     0.0000
                                                    R-squared         =     0.4460
                                                    Root MSE          =     17.821

------------------------------------------------------------------------------
             |               Robust
       durat |  Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
     benefit |   .0018882   .0145426     0.13   0.897    -.0266196     .030396
          ky |  -2.530766   2.775851    -0.91   0.362     -7.97226    2.910728
             |
ky#c.benefit |
          1  |   .0118596   .0138756     0.85   0.393    -.0153406    .0390598
             |
     prewage |   .0017802   .0020161     0.88   0.377    -.0021721    .0057324
      totmed |   .0051659   .0003044    16.97   0.000     .0045693    .0057625
         age |  -.0212881   .0970012    -0.22   0.826    -.2114393     .168863
             |
 c.age#c.age |   .0010247   .0012897     0.79   0.427    -.0015034    .0035529
             |
       _cons |   2.151544   3.112402     0.69   0.489     -3.94969    8.252778
------------------------------------------------------------------------------
```

```
686 . gen ldurat = ln(durat)
variable ldurat already defined
r(110);

687 .
688 . gen ltotmed = ln(totmed + 1)
variable ltotmed already defined
r(110);

689 .
690 . reg ldurat benefit ky c.benefit#i.ky prewage ltotmed age c.age#c.age, robust

Linear regression                               Number of obs     =      7,118
                                                F(6, 7110)        =          .
                                                Prob > F          =          .
                                                R-squared         =     0.0487
                                                Root MSE          =     1.2702

------------------------------------------------------------------------------
             |               Robust
      ldurat |  Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
     benefit |     .002501   .0008299     3.01   0.003     .0008743    .0041278
          ky |   -.3287077   .1642923    -2.00   0.045    -.6507695   -.0066459
             |
ky#c.benefit |
          1  |    .0016296   .0008086     2.02   0.044     .0000445    .0032148
             |
     prewage |    .0000293   .0001256     0.23   0.815    -.0002169    .0002756
     ltotmed |    1.04e-23   1.74e-24     5.97   0.000     6.99e-24    1.38e-23
         age |    .0199553   .0072271     2.76   0.006      .005788    .0341226
             |
 c.age#c.age |   -.0001411   .0000911    -1.55   0.121    -.0003196    .0000374
             |
       _cons |    .4760956   .1975901     2.41   0.016     .0887601     .863431
------------------------------------------------------------------------------

691 . egen z_durat = std(durat)
(1 missing value generated)

692 .
693 . reg z_durat benefit ky c.benefit#i.ky prewage totmed age c.age#c.age, robust

Linear regression                               Number of obs     =      7,117
                                                F(7, 7109)        =      76.61
                                                Prob > F          =     0.0000
                                                R-squared         =     0.4460
                                                Root MSE          =     .74489

------------------------------------------------------------------------------
             |               Robust
     z_durat |  Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
     benefit |    .0000789   .0006079     0.13   0.897    -.0011127    .0012705
          ky |   -.1057835   .1160278    -0.91   0.362    -.3332327    .1216656
             |
ky#c.benefit |
          1  |    .0004957     .00058     0.85   0.393    -.0006412    .0016327
             |
     prewage |    .0000744   .0000843     0.88   0.377    -.0000908    .0002396
      totmed |    .0002159   .0000127    16.97   0.000      .000191    .0002409
         age |   -.0008898   .0040546    -0.22   0.826     -.008838    .0070583
             |
 c.age#c.age |    .0000428   .0000539     0.79   0.427    -.0000628    .0001485
             |
       _cons |   -.3175256   .1300953    -2.44   0.015    -.5725512      -.0625
------------------------------------------------------------------------------
```

```
694 . log close
      name:  <unnamed>
       log:  [redacted]
  log type:  smcl
 closed on:   2 Nov 2025, 09:56:35
-------------------------------------------------------------------------------

      name:  <unnamed>
       log:  [redacted]
  log type:  smcl
 opened on:  13 Dec 2025, 11:53:23

695 .
696 . * Load dataset
697 . use "INJURY.DTA", clear
file INJURY.DTA not found
r(601);

end of do-file

r(601);

[redacted]

699 . ****************************************************
700 . * Project: Injury Dataset Analysis
701 . * Purpose: Analyze how Kentucky and Michigan differ in how
702 . *          workers' compensation benefits affect the duration
703 . *          of injuries, allowing for different baseline durations
704 . *          by state.
705 . * Dataset: INJURY.DTA
706 . * Authors: Burton, Dejah; Akindale, Dammy; Del Aguila, Gus
707 . ****************************************************
708 .
709 . clear all

[redacted]

711 . set more off

712 .
713 .
714 . * Start logging output (choose append on rerun)
[redacted]
log file already open
r(604);

end of do-file

r(604);

716 . log close
      name:  <unnamed>
       log:  [redacted]
  log type:  smcl
 closed on:  13 Dec 2025, 12:02:25
-------------------------------------------------------------------------------

      name:  <unnamed>
       log:  [redacted]
  log type:  smcl
 opened on:  13 Dec 2025, 12:02:39
```

```
717 .
718 . * Load dataset
[redacted]

720 .
721 .
722 . *View data
723 . br

724 . sum
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
afchnge	7,122	.4800618	1.945965	-127	65
highearn	7,122	.4276889	1.259329	0	64
male	7,106	.6771742	3.712077	-128	5
married	6,825	.6978755	.5225034	0	16
hosp	7,122	.2351867	2.241903	-128	32
indust	7,097	2.289136	1.937026	-127	67
injtype	7,122	4.478798	1.904447	1	71
age	7,118	34.71354	12.60055	5	98
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
injdes	7,122	4387.092	1333.947	1007	11732
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
ky	7,122	.786296	.409949	0	1
mi	7,122	.2076664	1.75616	-128	64
ldurat	7,122	1.327854	1.301852	-1.390204	5.204007
afhigh	7,122	.2080876	.8991886	0	65
lprewage	7,122	1.29e+16	1.09e+18	-5.08466	9.19e+19
lage	7,118	36.33313	2761.715	-2.995732	233003.3
ltotmed	7,122	3.48e+18	2.93e+20	-6.926684	2.47e+22
head	7,122	.0289245	1.623277	-128	32
neck	7,122	-.021904	2.7524	-128	64
upextr	7,122	.3073575	.805489	0	33
trunk	7,122	.0494243	3.595559	-128	64
lowback	7,122	.2684639	.5084177	0	16
lowextr	7,122	.2479641	.9774954	0	72
occdis	7,122	-.0004212	1.572701	-128	32
manuf	7,097	.2754685	2.497588	-127	65
construc	7,097	.1389319	1.634388	-128	33
highlpre	7,122	2.487598	3.05665	-7.957778	7.36714
z_durat	7,121	-3.59e-10	1	-.4074581	7.199964

```
725 . des
```

[redacted]

```
  Observations:         7,122
     Variables:            31                  2 Nov 2025 09:58
```

Variable name	Storage type	Display format	Value label	Variable label
durat	float	%9.0g		duration of benefits
afchnge	byte	%9.0g		=1 if after change in benefits
highearn	byte	%9.0g		=1 if high earner
male	byte	%9.0g		=1 if male
married	byte	%9.0g		=1 if married
hosp	byte	%9.0g		=1 if inj. required hosp. stay
indust	byte	%9.0g		industry

injtype	byte	%9.0g	**type of injury**
age	byte	%9.0g	**age at time of injury**
prewage	float	%9.0g	**previous weekly wage, 1982 $**
totmed	float	%9.0g	**total med. costs, 1982 $**
injdes	int	%9.0g	**4 digit injury description**
benefit	float	%9.0g	**real dollar value of benefit**
ky	byte	%9.0g	**=1 for kentucky**
mi	byte	%9.0g	**=1 for michigan**
ldurat	float	%9.0g	**log(durat)**
afhigh	byte	%9.0g	**afchnge*highearn**
lprewage	float	%9.0g	**log(wage)**
lage	float	%9.0g	**log(age)**
ltotmed	float	%9.0g	**log(totmed); = 0 if totmed < 1**
head	byte	%9.0g	**=1 if head injury**
neck	byte	%9.0g	**=1 if neck injury**
upextr	byte	%9.0g	**=1 if upper extremities injury**
trunk	byte	%9.0g	**=1 if trunk injury**
lowback	byte	%9.0g	**=1 if lower back injury**
lowextr	byte	%9.0g	**=1 if lower extremities injury**
occdis	byte	%9.0g	**=1 if occupational disease**
manuf	byte	%9.0g	**=1 if manufacturing industry**
construc	byte	%9.0g	**=1 if construction industry**
highlpre	float	%9.0g	**highearn*lprewage**
z_durat	float	%9.0g	**Standardized values of durat**

Sorted by: **ky**

```
726 .
727 .
728 . ****************************************************
729 . *                ANALYSIS SECTION
730 . ****************************************************
731 .
732 .
733 . * View data
734 . br

735 .
736 . * Basic summaries
737 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	**7,121**	**9.748029**	**23.92401**	**5.42e-20**	**182**
benefit	**7,122**	**163.0581**	**61.66563**	**2.21e-37**	**742.2209**
prewage	**7,122**	**330.0903**	**182.8132**	**9.526563**	**1583.1**
totmed	**7,122**	**1282.995**	**3045.67**	**0**	**48112.54**
age	**7,118**	**34.71354**	**12.60055**	**5**	**98**

```
738 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	**1,522**	**13.27891**	**31.57231**	**.25**	**182**
benefit	**1,522**	**208.8087**	**53.20398**	**28.4958**	**473.0752**
prewage	**1,522**	**416.7323**	**224.2237**	**159.25**	**1583.1**
totmed	**1,522**	**1789.258**	**3991.734**	**0**	**44945.31**
age	**1,522**	**36.44021**	**12.62067**	**12**	**73**

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
739 .
740 . * Check state variable
741 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
742 .
743 . * Keep only Kentucky (1) and Michigan (0)
744 . drop if ky > 1
    (0 observations deleted)

745 .
746 . * Confirm cleanup
747 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
748 .
749 . * Summary stats after cleaning
750 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
751 . by ky, sort: summarize durat benefit prewage totmed age
```

```
-> ky = 0
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

```
-> ky = 1
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	**5,599**	**8.788215**	**21.27965**	**5.42e-20**	**182**
benefit	**5,600**	**150.6237**	**57.82518**	**2.21e-37**	**742.2209**
prewage	**5,600**	**306.5422**	**162.0262**	**9.526563**	**1237.861**
totmed	**5,600**	**1145.399**	**2716.71**	**0**	**48112.54**
age	**5,596**	**34.24392**	**12.55518**	**5**	**98**

```
752 .
753 . * Describe key variables
754 . describe benefit prewage totmed
```

Variable name	Storage type	Display format	Value label	Variable label
benefit	float	%9.0g		**real dollar value of benefit**
prewage	float	%9.0g		**previous weekly wage, 1982 $**
totmed	float	%9.0g		**total med. costs, 1982 $**

```
755 .
756 . * Identify potential outliers for Kentucky
757 . list benefit prewage totmed if ky==1 & (benefit>10000 | prewage>10000 | totmed>10000) in 1/20

758 .
759 . ******************************************************
760 . * Inspect Top 10 Largest Values by Category
761 . ******************************************************
762 .
763 . * Top 10 Benefits (descending)
764 . gsort -benefit

765 . list benefit if ky==1 in 1/10, clean

          benefit
  1.   742.2209
  2.    502.775

766 .
767 . * Top 10 Prewages (descending)
768 . gsort -prewage

769 . list prewage if ky==1 in 1/10, clean

          prewage
  2.   1237.861
  3.   1153.602

770 .
771 . * Top 10 Total Medical Costs (descending)
772 . gsort -totmed

773 . list totmed if ky==1 in 1/10, clean

           totmed
  1.   48112.54
  2.   45017.59
  5.   41441.56
  6.   40831.17
  7.   38980.07
  8.   38961.04
  9.   34953.11
```

```
774 .
775 . * Restore sorting by state
776 . sort ky

777 .
778 . ****************************************************
779 . * Outlier Removal and Validation
780 . ****************************************************
781 .
782 .
783 . * --- Review large outliers before dropping ---
784 . list ky benefit prewage totmed age if benefit > 10000 | prewage > 10000 | totmed > 50000, clean

785 . count if benefit > 10000 | prewage > 10000 | totmed > 50000
      0

786 .
787 . * --- Drop the outliers ---
788 . drop if benefit > 10000 | prewage > 10000 | totmed > 50000
    (0 observations deleted)

789 .
790 . * --- Confirm they are gone ---
791 . count if benefit > 10000 | prewage > 10000 | totmed > 50000
      0

792 .
793 .
794 . ****************************************************
795 . * Check for Negative or Invalid Values
796 . ****************************************************
797 .
798 . * --- Review negatives before dropping ---
799 . list ky benefit prewage age if benefit < 0 | prewage < 0 | age < 0, clean

800 . count if benefit < 0 | prewage < 0 | age < 0
      0

801 .
802 . * --- Drop them and confirm ---
803 . drop if benefit < 0 | prewage < 0 | age < 0
    (0 observations deleted)

804 . count if benefit < 0 | prewage < 0 | age < 0
      0

805 .
806 .
807 . ****************************************************
808 . * Post-Cleanup Summaries
809 . ****************************************************
810 .
811 . * Kentucky summary
812 . summarize durat benefit prewage totmed age if ky==1
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
813 .
814 . * Michigan summary
815 . summarize durat benefit prewage totmed age if ky==0
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

```
816 .
817 . * Combined summary
818 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
819 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
820 .
821 .
822 . ****************************************************
823 . * Save and Close
824 . ****************************************************
825 .
```

826 . save, replace
[redacted]

827 . log close
      name: **<unnamed>**
[redacted]
  log type: **smcl**
 closed on: **13 Dec 2025, 12:02:40**

---

      name: **<unnamed>**
[redacted]
  log type: **smcl**
 opened on: **13 Dec 2025, 12:07:06**

828 .
829 . * Load dataset
[redacted]

831 .
832 .
833 . *View data
834 . br

835 . sum

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
afchnge	7,122	.4800618	1.945965	-127	65
highearn	7,122	.4276889	1.259329	0	64
male	7,106	.6771742	3.712077	-128	5
married	6,825	.6978755	.5225034	0	16
hosp	7,122	.2351867	2.241903	-128	32
indust	7,097	2.289136	1.937026	-127	67
injtype	7,122	4.478798	1.904447	1	71
age	7,118	34.71354	12.60055	5	98
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
injdes	7,122	4387.092	1333.947	1007	11732
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
ky	7,122	.786296	.409949	0	1
mi	7,122	.2076664	1.75616	-128	64
ldurat	7,122	1.327854	1.301852	-1.390204	5.204007
afhigh	7,122	.2080876	.8991886	0	65
lprewage	7,122	1.29e+16	1.09e+18	-5.08466	9.19e+19
lage	7,118	36.33313	2761.715	-2.995732	233003.3
ltotmed	7,122	3.48e+18	2.93e+20	-6.926684	2.47e+22
head	7,122	.0289245	1.623277	-128	32
neck	7,122	-.021904	2.7524	-128	64
upextr	7,122	.3073575	.805489	0	33
trunk	7,122	.0494243	3.595559	-128	64
lowback	7,122	.2684639	.5084177	0	16
lowextr	7,122	.2479641	.9774954	0	72
occdis	7,122	-.0004212	1.572701	-128	32
manuf	7,097	.2754685	2.497588	-127	65
construc	7,097	.1389319	1.634388	-128	33
highlpre	7,122	2.487598	3.05665	-7.957778	7.36714
z_durat	7,121	-3.59e-10	1	-.4074581	7.199964

```
836 . des
```

[redacted]

```
 Observations:          7,122
    Variables:             31                  13 Dec 2025 12:02
-------------------------------------------------------------------------------------------------------------------------------
Variable      Storage   Display    Value
    name         type    format    label      Variable label
-------------------------------------------------------------------------------------------------------------------------------
durat           float   %9.0g                 duration of benefits
afchnge         byte    %9.0g                 =1 if after change in benefits
highearn        byte    %9.0g                 =1 if high earner
male            byte    %9.0g                 =1 if male
married         byte    %9.0g                 =1 if married
hosp            byte    %9.0g                 =1 if inj. required hosp. stay
indust          byte    %9.0g                 industry
injtype         byte    %9.0g                 type of injury
age             byte    %9.0g                 age at time of injury
prewage         float   %9.0g                 previous weekly wage, 1982 $
totmed          float   %9.0g                 total med. costs, 1982 $
injdes          int     %9.0g                 4 digit injury description
benefit         float   %9.0g                 real dollar value of benefit
ky              byte    %9.0g                 =1 for kentucky
mi              byte    %9.0g                 =1 for michigan
ldurat          float   %9.0g                 log(durat)
afhigh          byte    %9.0g                 afchnge*highearn
lprewage        float   %9.0g                 log(wage)
lage            float   %9.0g                 log(age)
ltotmed         float   %9.0g                 log(totmed); = 0 if totmed < 1
head            byte    %9.0g                 =1 if head injury
neck            byte    %9.0g                 =1 if neck injury
upextr          byte    %9.0g                 =1 if upper extremities injury
trunk           byte    %9.0g                 =1 if trunk injury
lowback         byte    %9.0g                 =1 if lower back injury
lowextr         byte    %9.0g                 =1 if lower extremities injury
occdis          byte    %9.0g                 =1 if occupational disease
manuf           byte    %9.0g                 =1 if manufacturing industry
construc        byte    %9.0g                 =1 if construction industry
highlpre        float   %9.0g                 highearn*lprewage
z_durat         float   %9.0g                 Standardized values of durat
-------------------------------------------------------------------------------------------------------------------------------
Sorted by: ky

837 .
838 .
839 . *****************************************************
840 . *                ANALYSIS SECTION
841 . *****************************************************
842 .
843 .
844 . * View data
845 . br

846 .
847 . * Basic summaries
```

```
848 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
849 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
850 .
851 . * Check state variable
852 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
853 .
854 . * Keep only Kentucky (1) and Michigan (0)
855 . drop if ky > 1
    (0 observations deleted)

856 .
857 . * Confirm cleanup
858 . tab ky
```

=1 for kentucky	Freq.	Percent	Cum.
0	1,522	21.37	21.37
1	5,600	78.63	100.00
Total	7,122	100.00	

```
859 .
860 . * Summary stats after cleaning
861 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
862 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
863 .
864 . * Describe key variables
865 . describe benefit prewage totmed
```

Variable name	Storage type	Display format	Value label	Variable label
benefit	float	%9.0g		real dollar value of benefit
prewage	float	%9.0g		previous weekly wage, 1982 $
totmed	float	%9.0g		total med. costs, 1982 $

```
866 .
867 . * Identify potential outliers for Kentucky
868 . list benefit prewage totmed if ky==1 & (benefit>10000 | prewage>10000 | totmed>10000) in 1/20

869 .
870 . ****************************************************
871 . * Inspect Top 10 Largest Values by Category
```

```
872 . ******************************************************
873 .
874 . * Top 10 Benefits (descending)
875 . gsort -benefit

876 . list benefit if ky==1 in 1/10, clean

           benefit
      1.   742.2209
      2.    502.775

877 .
878 . * Top 10 Prewages (descending)
879 . gsort -prewage

880 . list prewage if ky==1 in 1/10, clean

           prewage
      2.   1237.861
      3.   1153.602

881 .
882 . * Top 10 Total Medical Costs (descending)
883 . gsort -totmed

884 . list totmed if ky==1 in 1/10, clean

            totmed
      1.   48112.54
      2.   45017.59
      5.   41441.56
      6.   40831.17
      7.   38980.07
      8.   38961.04
      9.   34953.11

885 .
886 . * Restore sorting by state
887 . sort ky

888 .
889 . ******************************************************
890 . * Outlier Removal and Validation
891 . ******************************************************
892 .
893 .
894 . * --- Review large outliers before dropping ---
895 . list ky benefit prewage totmed age if benefit > 10000 | prewage > 10000 | totmed > 50000, clean

896 . count if benefit > 10000 | prewage > 10000 | totmed > 50000
      0

897 .
898 . * --- Drop the outliers ---
899 . drop if benefit > 10000 | prewage > 10000 | totmed > 50000
    (0 observations deleted)
```

```
900 .
901 . * --- Confirm they are gone ---
902 . count if benefit > 10000 | prewage > 10000 | totmed > 50000
      0

903 .
904 .
905 . ****************************************************
906 . * Check for Negative or Invalid Values
907 . ****************************************************
908 .
909 . * --- Review negatives before dropping ---
910 . list ky benefit prewage age if benefit < 0 | prewage < 0 | age < 0, clean

911 . count if benefit < 0 | prewage < 0 | age < 0
      0

912 .
913 . * --- Drop them and confirm ---
914 . drop if benefit < 0 | prewage < 0 | age < 0
    (0 observations deleted)

915 . count if benefit < 0 | prewage < 0 | age < 0
      0

916 .
917 .
918 . ****************************************************
919 . * Post-Cleanup Summaries
920 . ****************************************************
921 .
922 . * Kentucky summary
923 . summarize durat benefit prewage totmed age if ky==1
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
924 .
925 . * Michigan summary
926 . summarize durat benefit prewage totmed age if ky==0
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

```
927 .
```

```
928 . * Combined summary
929 . summarize durat benefit prewage totmed age
```

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
age	7,118	34.71354	12.60055	5	98

```
930 . by ky, sort: summarize durat benefit prewage totmed age
```

-> ky = 0

Variable	Obs	Mean	Std. dev.	Min	Max
durat	1,522	13.27891	31.57231	.25	182
benefit	1,522	208.8087	53.20398	28.4958	473.0752
prewage	1,522	416.7323	224.2237	159.25	1583.1
totmed	1,522	1789.258	3991.734	0	44945.31
age	1,522	36.44021	12.62067	12	73

-> ky = 1

Variable	Obs	Mean	Std. dev.	Min	Max
durat	5,599	8.788215	21.27965	5.42e-20	182
benefit	5,600	150.6237	57.82518	2.21e-37	742.2209
prewage	5,600	306.5422	162.0262	9.526563	1237.861
totmed	5,600	1145.399	2716.71	0	48112.54
age	5,596	34.24392	12.55518	5	98

```
931 .
932 .
933 . ****************************************************
934 . * Save and Close
935 . ****************************************************
936 .
937 . save, replace
```

[redacted]

```
938 . log close
      name:  <unnamed>
```

[redacted]

```
  log type:  smcl
 closed on:  13 Dec 2025, 12:07:19
```

```
      name:  <unnamed>
```

[redacted]

```
  log type:  smcl
 opened on:  13 Dec 2025, 12:07:19
```

939 . sum

Variable	Obs	Mean	Std. dev.	Min	Max
durat	7,121	9.748029	23.92401	5.42e-20	182
afchnge	7,122	.4800618	1.945965	-127	65
highearn	7,122	.4276889	1.259329	0	64
male	7,106	.6771742	3.712077	-128	5
married	6,825	.6978755	.5225034	0	16
hosp	7,122	.2351867	2.241903	-128	32
indust	7,097	2.289136	1.937026	-127	67
injtype	7,122	4.478798	1.904447	1	71
age	7,118	34.71354	12.60055	5	98
prewage	7,122	330.0903	182.8132	9.526563	1583.1
totmed	7,122	1282.995	3045.67	0	48112.54
injdes	7,122	4387.092	1333.947	1007	11732
benefit	7,122	163.0581	61.66563	2.21e-37	742.2209
ky	7,122	.786296	.409949	0	1
mi	7,122	.2076664	1.75616	-128	64
ldurat	7,122	1.327854	1.301852	-1.390204	5.204007
afhigh	7,122	.2080876	.8991886	0	65
lprewage	7,122	1.29e+16	1.09e+18	-5.08466	9.19e+19
lage	7,118	36.33313	2761.715	-2.995732	233003.3
ltotmed	7,122	3.48e+18	2.93e+20	-6.926684	2.47e+22
head	7,122	.0289245	1.623277	-128	32
neck	7,122	-.021904	2.7524	-128	64
upextr	7,122	.3073575	.805489	0	33
trunk	7,122	.0494243	3.595559	-128	64
lowback	7,122	.2684639	.5084177	0	16
lowextr	7,122	.2479641	.9774954	0	72
occdis	7,122	-.0004212	1.572701	-128	32
manuf	7,097	.2754685	2.497588	-127	65
construc	7,097	.1389319	1.634388	-128	33
highlpre	7,122	2.487598	3.05665	-7.957778	7.36714
z_durat	7,121	-3.59e-10	1	-.4074581	7.199964

940 . br

941 . des

[redacted]
Observations: 7,122
Variables: 31 13 Dec 2025 12:07

Variable name	Storage type	Display format	Value label	Variable label
durat	float	%9.0g		duration of benefits
afchnge	byte	%9.0g		=1 if after change in benefits
highearn	byte	%9.0g		=1 if high earner
male	byte	%9.0g		=1 if male
married	byte	%9.0g		=1 if married
hosp	byte	%9.0g		=1 if inj. required hosp. stay
indust	byte	%9.0g		industry
injtype	byte	%9.0g		type of injury
age	byte	%9.0g		age at time of injury
prewage	float	%9.0g		previous weekly wage, 1982 $
totmed	float	%9.0g		total med. costs, 1982 $
injdes	int	%9.0g		4 digit injury description
benefit	float	%9.0g		real dollar value of benefit
ky	byte	%9.0g		=1 for kentucky

mi	byte	%9.0g	**=1 for michigan**
ldurat	float	%9.0g	**log(durat)**
afhigh	byte	%9.0g	**afchnge*highearn**
lprewage	float	%9.0g	**log(wage)**
lage	float	%9.0g	**log(age)**
ltotmed	float	%9.0g	**log(totmed); = 0 if totmed < 1**
head	byte	%9.0g	**=1 if head injury**
neck	byte	%9.0g	**=1 if neck injury**
upextr	byte	%9.0g	**=1 if upper extremities injury**
trunk	byte	%9.0g	**=1 if trunk injury**
lowback	byte	%9.0g	**=1 if lower back injury**
lowextr	byte	%9.0g	**=1 if lower extremities injury**
occdis	byte	%9.0g	**=1 if occupational disease**
manuf	byte	%9.0g	**=1 if manufacturing industry**
construc	byte	%9.0g	**=1 if construction industry**
highlpre	float	%9.0g	**highearn*lprewage**
z_durat	float	%9.0g	**Standardized values of durat**

Sorted by: **ky**

```
942 . * Make sure we're on KY (1) vs MI (0) only
943 . drop if ky>1
    (0 observations deleted)

944 .
945 . * graph export "hist_durat.png", width(1400) replace
946 .
947 . histogram durat, by(ky) width(2) percent
```

[redacted]

```
949 .  histogram durat, by(ky) width(2) percent

950 . histogram benefit, by(ky) percent

951 . histogram prewage, by(ky) percent

952 . histogram totmed, by(ky) percent

953 . histogram age, by(ky) percent

954 .
955 . twoway (scatter durat benefit if ky==1, msymbol(o)) (scatter durat benefit if ky==0, msymbol(triangle)) (lfit durat be

956 . twoway (scatter durat prewage if ky==1, msymbol(o)) (scatter durat prewage if ky==0, msymbol(triangle)) (lfit durat pr

957 . twoway (scatter durat totmed if ky==1, msymbol(o)) (scatter durat totmed if ky==0, msymbol(triangle)) (lfit durat totm

958 . twoway (scatter durat age if ky==1, msymbol(o)) (scatter durat age if ky==0, msymbol(triangle)) (lfit durat age if ky=

959 . reg durat benefit ky c.benefit#i.ky prewage totmed age c.age#c.age
```

Source	SS	df	MS		
Model	**1817247.64**	**7**	**259606.806**	Number of obs	= **7,117**
Residual	**2257669.12**	**7,109**	**317.579001**	F(7, 7109)	= **817.46**
				Prob > F	= **0.0000**
				R-squared	= **0.4460**
				Adj R-squared	= **0.4454**
Total	**4074916.76**	**7,116**	**572.641478**	Root MSE	= **17.821**

durat	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
benefit	.0018882	.0098464	0.19	0.848	-.0174138	.0211901
ky	-2.530766	2.004367	-1.26	0.207	-6.459922	1.39839
ky#c.benefit						
1	.0118596	.0097179	1.22	0.222	-.0071905	.0309096
prewage	.0017802	.0016378	1.09	0.277	-.0014304	.0049908
totmed	.0051659	.0000703	73.50	0.000	.0050281	.0053037
age	-.0212881	.1014542	-0.21	0.834	-.2201685	.1775923
c.age#c.age	.0010247	.0012683	0.81	0.419	-.0014615	.0035109
_cons	2.151544	2.567062	0.84	0.402	-2.880661	7.183749

960 . vif

Variable	VIF	1/VIF
benefit	8.26	0.121093
ky	15.14	0.066066
ky#c.benefit		
1	13.64	0.073326
prewage	2.01	0.497699
totmed	1.03	0.973273
age	36.62	0.027308
c.age#c.age	36.11	0.027697
Mean VIF	16.11	

961 . reg durat benefit ky c.benefit#i.ky prewage totmed age c.age#c.age

Source	SS	df	MS		
Model	1817247.64	7	259606.806	Number of obs	7,117
Residual	2257669.12	7,109	317.579001	F(7, 7109)	817.46
Total	4074916.76	7,116	572.641478	Prob > F	0.0000
				R-squared	0.4460
				Adj R-squared	0.4454
				Root MSE	17.821

durat	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
benefit	.0018882	.0098464	0.19	0.848	-.0174138	.0211901
ky	-2.530766	2.004367	-1.26	0.207	-6.459922	1.39839
ky#c.benefit						
1	.0118596	.0097179	1.22	0.222	-.0071905	.0309096
prewage	.0017802	.0016378	1.09	0.277	-.0014304	.0049908
totmed	.0051659	.0000703	73.50	0.000	.0050281	.0053037
age	-.0212881	.1014542	-0.21	0.834	-.2201685	.1775923
c.age#c.age	.0010247	.0012683	0.81	0.419	-.0014615	.0035109
_cons	2.151544	2.567062	0.84	0.402	-2.880661	7.183749

962 . vif

Variable	VIF	1/VIF
benefit	**8.26**	**0.121093**
ky	**15.14**	**0.066066**
ky#c.benefit		
1	**13.64**	**0.073326**
prewage	**2.01**	**0.497699**
totmed	**1.03**	**0.973273**
age	**36.62**	**0.027308**
c.age#c.age	**36.11**	**0.027697**
Mean VIF	**16.11**	

963 . estat hettest

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of **durat**

H0: Constant variance

chi2(**1**) = **25689.84**
Prob > chi2 = **0.0000**

964 . reg durat benefit ky c.benefit#i.ky prewage totmed age c.age#c.age, robust

Linear regression

Number of obs	**7,117**
F(7, 7109)	**76.61**
Prob > F	**0.0000**
R-squared	**0.4460**
Root MSE	**17.821**

durat	Coefficient	Robust std. err.	t	P>|t|	[95% conf.	interval]
benefit	**.0018882**	**.0145426**	**0.13**	**0.897**	**-.0266196**	**.030396**
ky	**-2.530766**	**2.775851**	**-0.91**	**0.362**	**-7.97226**	**2.910728**
ky#c.benefit						
1	**.0118596**	**.0138756**	**0.85**	**0.393**	**-.0153406**	**.0390598**
prewage	**.0017802**	**.0020161**	**0.88**	**0.377**	**-.0021721**	**.0057324**
totmed	**.0051659**	**.0003044**	**16.97**	**0.000**	**.0045693**	**.0057625**
age	**-.0212881**	**.0970012**	**-0.22**	**0.826**	**-.2114393**	**.168863**
c.age#c.age	**.0010247**	**.0012897**	**0.79**	**0.427**	**-.0015034**	**.0035529**
_cons	**2.151544**	**3.112402**	**0.69**	**0.489**	**-3.94969**	**8.252778**

965 . reg durat benefit ky c.benefit#i.ky prewage totmed age c.age#c.age, robust

Linear regression

Number of obs	**7,117**
F(7, 7109)	**76.61**
Prob > F	**0.0000**
R-squared	**0.4460**
Root MSE	**17.821**

durat	Coefficient	Robust std. err.	t	P>|t|	[95% conf.	interval]
benefit	.0018882	.0145426	0.13	0.897	-.0266196	.030396
ky	-2.530766	2.775851	-0.91	0.362	-7.97226	2.910728
ky#c.benefit						
1	.0118596	.0138756	0.85	0.393	-.0153406	.0390598
prewage	.0017802	.0020161	0.88	0.377	-.0021721	.0057324
totmed	.0051659	.0003044	16.97	0.000	.0045693	.0057625
age	-.0212881	.0970012	-0.22	0.826	-.2114393	.168863
c.age#c.age	.0010247	.0012897	0.79	0.427	-.0015034	.0035529
_cons	2.151544	3.112402	0.69	0.489	-3.94969	8.252778

966 .
967 . reg ldurat benefit ky c.benefit#i.ky prewage ltotmed age c.age#c.age, robust

Linear regression

Number of obs	=	7,118
F(6, 7110)	=	.
Prob > F	=	.
R-squared	=	0.0487
Root MSE	=	1.2702

ldurat	Coefficient	Robust std. err.	t	P>|t|	[95% conf.	interval]
benefit	.002501	.0008299	3.01	0.003	.0008743	.0041278
ky	-.3287077	.1642923	-2.00	0.045	-.6507695	-.0066459
ky#c.benefit						
1	.0016296	.0008086	2.02	0.044	.0000445	.0032148
prewage	.0000293	.0001256	0.23	0.815	-.0002169	.0002756
ltotmed	1.04e-23	1.74e-24	5.97	0.000	6.99e-24	1.38e-23
age	.0199553	.0072271	2.76	0.006	.005788	.0341226
c.age#c.age	-.0001411	.0000911	-1.55	0.121	-.0003196	.0000374
_cons	.4760956	.1975901	2.41	0.016	.0887601	.863431

968 . egen z_durat = std(durat)
variable z_durat already defined
r(110);

end of do-file

r(110);

969 . exit, clear