.

. // Model B.SSV.1

.

. eststo clear

. eststo: logit dv\_indicator `ss\_vars' `covariates' ib(freq).state ib(freq).time, vce(cl mineid) offset(lnhours) iter(50) or

note: 17.state != 0 predicts success perfectly

17.state dropped and 11 obs not used

Iteration 0: log pseudolikelihood = -1977.2679

Iteration 1: log pseudolikelihood = -1770.5794

Iteration 2: log pseudolikelihood = -1732.9439

Iteration 3: log pseudolikelihood = -1731.934

Iteration 4: log pseudolikelihood = -1731.9318

Iteration 5: log pseudolikelihood = -1731.9318

Logistic regression Number of obs = 6,242

Wald chi2(31) = .

Log pseudolikelihood = -1731.9318 Prob > chi2 = .

(Std. Err. adjusted for 1,237 clusters in mineid)

-----------------------------------------------------------------------------------

| Robust

dv\_indicator | Odds Ratio Std. Err. z P>|z| [95% Conf. Interval]

------------------+----------------------------------------------------------------

p48\_ss | 1.591619 .3288566 2.25 0.024 1.061612 2.38623

p75\_ss | 1.004391 .0045313 0.97 0.331 .9955491 1.013312

mine\_time | 1.021711 .0199033 1.10 0.270 .9834362 1.061475

onsite\_insp\_hours | 1.00363 .0004486 8.11 0.000 1.002751 1.00451

|

state |

1 | 1.123287 .8577514 0.15 0.879 .2514816 5.017361

2 | .6682771 .0916991 -2.94 0.003 .5106896 .8744925

3 | 1.393011 .6065407 0.76 0.446 .5933721 3.270259

4 | 4.68726 3.587147 2.02 0.044 1.045916 21.00589

5 | .9251766 .4637526 -0.16 0.877 .3463799 2.471136

6 | .474692 .0680998 -5.19 0.000 .358342 .6288197

7 | 2.140244 2.173109 0.75 0.454 .292544 15.65797

8 | .8240103 .1145552 -1.39 0.164 .6274762 1.082102

9 | .2143875 .0293924 -11.23 0.000 .1638703 .2804779

10 | .6762635 .2821319 -0.94 0.348 .2985391 1.531901

11 | 3.204469 2.764658 1.35 0.177 .5907191 17.38325

12 | .5210702 .1132834 -3.00 0.003 .3402831 .7979065

13 | 1.870055 1.245282 0.94 0.347 .5070297 6.897238

14 | .4232851 .1771524 -2.05 0.040 .186376 .9613381

15 | .6264819 .1081415 -2.71 0.007 .4466595 .8786997

17 | 1 (empty)

|

time |

2000 | 1.008321 .1909547 0.04 0.965 .6956636 1.461499

2002 | .6888162 .1332568 -1.93 0.054 .4714459 1.00641

2003 | .9164394 .2085747 -0.38 0.701 .5866468 1.43163

2004 | .5334594 .1150487 -2.91 0.004 .3495641 .8140966

2005 | .4832934 .1009138 -3.48 0.000 .3209787 .7276885

2006 | .4916855 .1065702 -3.28 0.001 .3215097 .7519358

2007 | .324678 .0704422 -5.18 0.000 .212215 .4967406

2008 | .2336927 .0513654 -6.61 0.000 .151898 .3595325

2009 | .2762282 .0690527 -5.15 0.000 .1692315 .4508738

2010 | .2053725 .0503947 -6.45 0.000 .1269617 .3322093

2011 | .2514648 .0619557 -5.60 0.000 .1551524 .4075638

2012 | .1773101 .0438871 -6.99 0.000 .1091559 .288018

2013 | .2620911 .0772026 -4.55 0.000 .147136 .4668588

2014 | .1647413 .0483279 -6.15 0.000 .0927037 .2927575

2015 | .1120367 .0351591 -6.98 0.000 .0605673 .2072444

|

\_cons | .0001219 .0000222 -49.43 0.000 .0000853 .0001743

lnhours | 1 (offset)

-----------------------------------------------------------------------------------

Note: 0 failures and 19 successes completely determined.

(est1 stored)

. esttab using `"`directory'Model.`injury\_label'.`time\_label'.`violation\_level\_label'.B.SSV.1.csv"', replace plain wide p eform

(note: file C:\Users\jbodson\Dropbox (Stanford Law School)\R-code\Injury-Classification\PS Model Summaries 10-10\Estout\Model.PS.Y.P.B.SSV.1.csv not found)

(output written to C:\Users\jbodson\Dropbox (Stanford Law School)\R-code\Injury-Classification\PS Model Summaries 10-10\Estout\Model.PS.Y.P.B.SSV.1.csv)

.

. pause "next"

.

. // diagnostics/assessment

. lfit

Logistic model for dv\_indicator, goodness-of-fit test

number of observations = 6242

number of covariate patterns = 6227

Pearson chi2(6192) = 7954.65

Prob > chi2 = 0.0000

.

. pause "next"

.

. linktest

Iteration 0: log likelihood = -2826.3083

Iteration 1: log likelihood = -1950.591

Iteration 2: log likelihood = -1758.7915

Iteration 3: log likelihood = -1744.3754

Iteration 4: log likelihood = -1735.1584

Iteration 5: log likelihood = -1720.7477

Iteration 6: log likelihood = -1720.3257

Iteration 7: log likelihood = -1720.3253

Iteration 8: log likelihood = -1720.3253

Logistic regression Number of obs = 6,242

LR chi2(2) = 2211.97

Prob > chi2 = 0.0000

Log likelihood = -1720.3253 Pseudo R2 = 0.3913

------------------------------------------------------------------------------

dv\_indicator | Coef. Std. Err. z P>|z| [95% Conf. Interval]

-------------+----------------------------------------------------------------

\_hat | .9653881 .0408407 23.64 0.000 .8853418 1.045434

\_hatsq | .0733117 .0172581 4.25 0.000 .0394865 .1071369

\_cons | -.1452126 .0568347 -2.56 0.011 -.2566065 -.0338187

------------------------------------------------------------------------------

Note: 0 failures and 284 successes completely determined.

.

. pause "next"

.

. estat classification

Logistic model for dv\_indicator

-------- True --------

Classified | D ~D | Total

-----------+--------------------------+-----------

+ | 5028 609 | 5637

- | 165 440 | 605

-----------+--------------------------+-----------

Total | 5193 1049 | 6242

Classified + if predicted Pr(D) >= .5

True D defined as dv\_indicator != 0

--------------------------------------------------

Sensitivity Pr( +| D) 96.82%

Specificity Pr( -|~D) 41.94%

Positive predictive value Pr( D| +) 89.20%

Negative predictive value Pr(~D| -) 72.73%

--------------------------------------------------

False + rate for true ~D Pr( +|~D) 58.06%

False - rate for true D Pr( -| D) 3.18%

False + rate for classified + Pr(~D| +) 10.80%

False - rate for classified - Pr( D| -) 27.27%

--------------------------------------------------

Correctly classified 87.60%

--------------------------------------------------

.

. pause "next"

.

. predict bssv1\_yhat

(option pr assumed; Pr(dv\_indicator))

(11 missing values generated)

. gen bssv1\_res = dv\_indicator - bssv1\_yhat

(11 missing values generated)

.

. summ dv\_indicator bssv1\_yhat

Variable | Obs Mean Std. Dev. Min Max

-------------+---------------------------------------------------------

dv\_indicator | 6,253 .8322405 .3736824 0 1

bssv1\_yhat | 6,242 .8319449 .2240986 .0024099 1

. /\*

> pause "next"

>

> scatter dv\_indicator bssv1\_yhat

>

> pause "next"

>

> scatter bssv1\_res dv\_indicator

>

> pause "next"

>

> scatter bssv1\_res bssv1\_yhat

> \*/

. pause "complete: B.SSV.1"

.