.

. // Model B.PP.2

.

. eststo clear

. eststo: logit dv\_indicator `pp\_lag\_1\_vars' `covariates' ib(freq).state ib(freq).time, vce(cl mineid) offset(lnhours) iter(50) or

Iteration 0: log pseudolikelihood = -13384.324

Iteration 1: log pseudolikelihood = -12737.834

Iteration 2: log pseudolikelihood = -12701.483

Iteration 3: log pseudolikelihood = -12701.301

Iteration 4: log pseudolikelihood = -12701.301

Logistic regression Number of obs = 26,110

Wald chi2(80) = .

Log pseudolikelihood = -12701.301 Prob > chi2 = .

(Std. Err. adjusted for 1,475 clusters in mineid)

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

| Robust

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

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

p48\_pp\_1lag | 1.001108 .0009181 1.21 0.227 .99931 1.002909

p75\_pp\_1lag | 1.00013 .0000275 4.72 0.000 1.000076 1.000184

mine\_time | 1.001313 .0024412 0.54 0.591 .9965394 1.006109

onsite\_insp\_hours | 1.00368 .0004433 8.32 0.000 1.002812 1.00455

|

state |

AL | 1.239023 .4323124 0.61 0.539 .625293 2.455136

AR | 2.300728 .1592467 12.04 0.000 2.008855 2.635007

CO | 1.727238 .2971013 3.18 0.001 1.232928 2.41973

IL | 3.530415 1.160884 3.84 0.000 1.853236 6.725443

IN | 1.520852 .2989697 2.13 0.033 1.034564 2.235715

MD | 1.600897 .3564697 2.11 0.035 1.034731 2.476848

MT | .4623139 .0293805 -12.14 0.000 .4081712 .5236386

NM | 2.414193 .1359947 15.65 0.000 2.161836 2.696009

OH | 1.367504 .2742334 1.56 0.119 .923065 2.025932

OK | 3.89809 1.624539 3.26 0.001 1.72231 8.822514

PA | 1.703528 .187978 4.83 0.000 1.372216 2.114834

TN | 2.161624 .4399379 3.79 0.000 1.450581 3.221205

UT | .4771449 .1370879 -2.58 0.010 .2717019 .8379303

VA | 1.048182 .0774812 0.64 0.524 .9068103 1.211595

WV | 1.682091 .1166322 7.50 0.000 1.468348 1.926947

WY | 2.128262 .3753271 4.28 0.000 1.506304 3.00703

|

time |

2000.25 | 1.3457 .1994601 2.00 0.045 1.006428 1.799342

2000.5 | 1.319109 .2000682 1.83 0.068 .9798951 1.77575

2000.75 | .7084035 .0961494 -2.54 0.011 .5429374 .9242971

2001 | .7987358 .1138392 -1.58 0.115 .6040687 1.056136

2001.25 | .9421741 .1289341 -0.44 0.663 .7205206 1.232015

2001.75 | .8511384 .1151518 -1.19 0.234 .6528897 1.109585

2002 | .8431627 .1199497 -1.20 0.230 .6379961 1.114307

2002.25 | .6861876 .0973735 -2.65 0.008 .5195807 .9062181

2002.5 | 1.036168 .1556535 0.24 0.813 .7719021 1.390906

2002.75 | .6864314 .1005075 -2.57 0.010 .5151858 .9145983

2003 | .7257445 .1107859 -2.10 0.036 .5380798 .9788606

2003.25 | .7731977 .1213242 -1.64 0.101 .5684949 1.05161

2003.5 | 1.221986 .2004754 1.22 0.222 .8859735 1.685435

2003.75 | .6386827 .0984774 -2.91 0.004 .4721063 .8640334

2004 | .6654719 .0998133 -2.72 0.007 .4959742 .892895

2004.25 | .5777156 .0871062 -3.64 0.000 .4299051 .7763465

2004.5 | .7070438 .1065744 -2.30 0.021 .5261902 .9500576

2004.75 | .526434 .0775689 -4.35 0.000 .3943857 .7026948

2005 | .5688163 .0860096 -3.73 0.000 .4229251 .7650337

2005.25 | .5780157 .085669 -3.70 0.000 .432296 .7728551

2005.5 | .6484011 .0960623 -2.92 0.003 .4849936 .8668649

2005.75 | .4398395 .0654472 -5.52 0.000 .328577 .5887776

2006 | .6017497 .0920561 -3.32 0.001 .44586 .8121445

2006.25 | .5478594 .0832193 -3.96 0.000 .406792 .7378461

2006.5 | .6067583 .0904206 -3.35 0.001 .4530723 .8125758

2006.75 | .5208476 .0816609 -4.16 0.000 .38305 .7082163

2007 | .4397438 .0668495 -5.40 0.000 .3264379 .5923778

2007.25 | .5023418 .0770412 -4.49 0.000 .3719251 .6784895

2007.5 | .5226052 .0822797 -4.12 0.000 .383848 .7115216

2007.75 | .3701169 .0578724 -6.36 0.000 .2724226 .5028459

2008 | .3742773 .0601385 -6.12 0.000 .2731639 .5128186

2008.25 | .3748587 .0600919 -6.12 0.000 .2737886 .5132393

2008.5 | .3511776 .0553121 -6.64 0.000 .2579043 .478184

2008.75 | .3216515 .0502264 -7.26 0.000 .2368476 .4368197

2009 | .3816391 .0624712 -5.88 0.000 .2768968 .5260023

2009.25 | .3391325 .0569796 -6.44 0.000 .24398 .4713946

2009.5 | .3408927 .0573455 -6.40 0.000 .2451474 .4740324

2009.75 | .289026 .0489804 -7.32 0.000 .2073415 .4028909

2010 | .3389427 .0586861 -6.25 0.000 .2414045 .4758909

2010.25 | .3009691 .0517765 -6.98 0.000 .2148264 .421654

2010.5 | .4513534 .0772988 -4.65 0.000 .3226561 .6313839

2010.75 | .2723489 .0464787 -7.62 0.000 .1949219 .3805314

2011 | .3177547 .0543598 -6.70 0.000 .2272338 .4443355

2011.25 | .3619634 .0633856 -5.80 0.000 .2568063 .5101802

2011.5 | .4365828 .0725913 -4.98 0.000 .3151636 .6047797

2011.75 | .2931406 .049696 -7.24 0.000 .2102675 .4086765

2012 | .3083806 .0520942 -6.96 0.000 .2214598 .4294168

2012.25 | .3411748 .0588197 -6.24 0.000 .2433475 .4783293

2012.5 | .2989466 .0540735 -6.68 0.000 .2097144 .4261465

2012.75 | .1551646 .0286601 -10.09 0.000 .1080362 .2228516

2013 | .2607014 .0484049 -7.24 0.000 .1811755 .3751349

2013.25 | .2667783 .0489927 -7.20 0.000 .1861362 .3823579

2013.5 | .2703448 .0520424 -6.79 0.000 .185378 .3942554

2013.75 | .1850334 .036769 -8.49 0.000 .1253439 .2731475

2014 | .2081972 .0435739 -7.50 0.000 .138142 .3137792

2014.25 | .2000173 .0394143 -8.17 0.000 .135936 .2943071

2014.5 | .2335572 .0478335 -7.10 0.000 .1563377 .3489176

2014.75 | .2598907 .053026 -6.60 0.000 .1742282 .3876707

2015 | .2096055 .0423554 -7.73 0.000 .1410584 .3114631

2015.25 | .1745153 .0366506 -8.31 0.000 .1156297 .2633889

2015.5 | .2980576 .0616456 -5.85 0.000 .1987243 .4470432

2015.75 | .1889641 .0407976 -7.72 0.000 .1237667 .2885061

2016 | .1230552 .0297737 -8.66 0.000 .0765859 .1977204

|

\_cons | .000089 9.95e-06 -83.46 0.000 .0000715 .0001108

lnhours | 1 (offset)

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

(est1 stored)

. esttab using `"`directory'Model.`injury\_label'.`time\_label'.`violation\_level\_label'.B.PP.2.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.Q.P.B.PP.2.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.Q.P.B.PP.2.csv)

.

. pause "next"

.

. // diagnostics/assessment

. lfit

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

number of observations = 26110

number of covariate patterns = 26092

Pearson chi2(26008) = 79329.37

Prob > chi2 = 0.0000

.

. pause "next"

.

. linktest

Iteration 0: log likelihood = -17544.81

Iteration 1: log likelihood = -12975.808

Iteration 2: log likelihood = -12503.158

Iteration 3: log likelihood = -12446.875

Iteration 4: log likelihood = -12446.787

Iteration 5: log likelihood = -12446.787

Logistic regression Number of obs = 26,110

LR chi2(2) = 10196.05

Prob > chi2 = 0.0000

Log likelihood = -12446.787 Pseudo R2 = 0.2906

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

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

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

\_hat | .9898971 .0142092 69.67 0.000 .9620475 1.017747

\_hatsq | .128094 .004775 26.83 0.000 .1187352 .1374527

\_cons | -.1614097 .0170797 -9.45 0.000 -.1948854 -.1279341

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

Note: 0 failures and 31 successes completely determined.

.

. pause "next"

.

. estat classification

Logistic model for dv\_indicator

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

Classified | D ~D | Total

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

+ | 13272 3604 | 16876

- | 2461 6773 | 9234

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

Total | 15733 10377 | 26110

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

True D defined as dv\_indicator != 0

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

Sensitivity Pr( +| D) 84.36%

Specificity Pr( -|~D) 65.27%

Positive predictive value Pr( D| +) 78.64%

Negative predictive value Pr(~D| -) 73.35%

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

False + rate for true ~D Pr( +|~D) 34.73%

False - rate for true D Pr( -| D) 15.64%

False + rate for classified + Pr(~D| +) 21.36%

False - rate for classified - Pr( D| -) 26.65%

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

Correctly classified 76.77%

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

.

. pause "next"

.

. predict bpp2\_yhat

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

(4179 missing values generated)

. gen bpp2\_res = dv\_indicator - bpp2\_yhat

(4,179 missing values generated)

.

. summ dv\_indicator bpp2\_yhat

Variable | Obs Mean Std. Dev. Min Max

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

dv\_indicator | 30,289 .5522797 .4972675 0 1

bpp2\_yhat | 26,110 .6025661 .2807997 .0001725 .9999986

. /\*

> pause "next"

>

> scatter dv\_indicator bpp2\_yhat

>

> pause "next"

>

> scatter bpp2\_res dv\_indicator

>

> pause "next"

>

> scatter bpp2\_res bpp2\_yhat

> \*/

. pause "complete: B.PP.2"

.