**. logit MR\_indicator `part\_penaltypoints\_lag\_1\_vars' `covariates' ib(freq).state ib(freq).time if sample\_pp, vce(cl mineid) offset(lnhours) iter(50) or**

note: 9.state != 0 predicts success perfectly

9.state dropped and 9 obs not used

note: 17.state != 0 predicts success perfectly

17.state dropped and 9 obs not used

Iteration 0: log pseudolikelihood = -1600.2972

Iteration 1: log pseudolikelihood = -1523.9796

Iteration 2: log pseudolikelihood = -1520.1872

Iteration 3: log pseudolikelihood = -1520.166

Iteration 4: log pseudolikelihood = -1520.166

Logistic regression Number of obs = 3,315

Wald chi2(28) = .

Log pseudolikelihood = -1520.166 Prob > chi2 = .

(Std. Err. adjusted for 725 clusters in mineid)

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

| Robust

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

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

p47\_pp\_1lag | .998565 .0022882 -0.63 0.531 .9940903 1.00306

p48\_pp\_1lag | 1.001118 .0008858 1.26 0.207 .999383 1.002855

p71\_pp\_1lag | 1.002901 .0037588 0.77 0.440 .9955607 1.010295

p72\_pp\_1lag | .99931 .0024737 -0.28 0.780 .9944734 1.00417

p75\_pp\_1lag | 1.000041 .0000204 2.00 0.045 1.000001 1.000081

p77\_pp\_1lag | 1.000534 .0003716 1.44 0.151 .9998058 1.001263

mine\_time | .9974674 .0147424 -0.17 0.864 .9689874 1.026784

onsite\_insp\_hours | 1.000641 .0001989 3.22 0.001 1.000251 1.001031

|

state |

1 | 1.62021 .7368341 1.06 0.289 .664453 3.950737

2 | 4.076358 .5483752 10.45 0.000 3.131582 5.306166

3 | .6734679 .3430393 -0.78 0.438 .2481686 1.827625

4 | 2.309413 .6655315 2.90 0.004 1.312806 4.062587

5 | 1.01979 .3584492 0.06 0.956 .5120583 2.030964

6 | .8848651 .1119816 -0.97 0.334 .6904873 1.133962

7 | 1.359292 .3418767 1.22 0.222 .8302832 2.225354

8 | .5409055 .0994671 -3.34 0.001 .3772194 .7756196

9 | 1 (empty)

10 | .5222916 .2051698 -1.65 0.098 .2418459 1.127943

11 | .4974276 .2124585 -1.63 0.102 .2153622 1.148922

12 | .9995995 .2373612 -0.00 0.999 .6276287 1.592023

13 | 1.924086 1.060358 1.19 0.235 .6533258 5.666554

14 | .8160933 .3171625 -0.52 0.601 .3810071 1.748021

15 | .6218765 .0901976 -3.28 0.001 .4679991 .8263486

17 | 1 (empty)

|

time |

2007 | 1.297188 .2041082 1.65 0.098 .9529484 1.765781

2009 | .5154154 .0807712 -4.23 0.000 .3791096 .7007287

2010 | .7126148 .1192199 -2.03 0.043 .5133924 .9891457

2011 | .85561 .1291964 -1.03 0.302 .6364219 1.150288

2012 | .739478 .128547 -1.74 0.083 .525965 1.039666

2013 | .5235837 .099368 -3.41 0.001 .3609453 .7595055

2014 | .4428561 .0876326 -4.12 0.000 .3004874 .6526779

2015 | .5847087 .111946 -2.80 0.005 .4017648 .8509561

|

\_cons | .0000111 1.73e-06 -73.20 0.000 8.16e-06 .000015

lnhours | 1 (offset)

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

**. lfit**

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

number of observations = 3315

number of covariate patterns = 3315

Pearson chi2(3284) = 3082.25

Prob > chi2 = 0.9944

**. linktest**

Iteration 0: log likelihood = -2282.022

Iteration 1: log likelihood = -1520.0536

Iteration 2: log likelihood = -1517.1131

Iteration 3: log likelihood = -1517.0833

Iteration 4: log likelihood = -1517.0833

Logistic regression Number of obs = 3,315

LR chi2(2) = 1529.88

Prob > chi2 = 0.0000

Log likelihood = -1517.0833 Pseudo R2 = 0.3352

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

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

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

\_hat | 1.094442 .0415865 26.32 0.000 1.012934 1.17595

\_hatsq | -.0279034 .0201255 -1.39 0.166 -.0673487 .0115419

\_cons | .0276804 .0511072 0.54 0.588 -.0724878 .1278486

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

**. estat classification**

Logistic model for MR\_indicator

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

Classified | D ~D | Total

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

+ | 1467 392 | 1859

- | 352 1104 | 1456

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

Total | 1819 1496 | 3315

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

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

Sensitivity Pr( +| D) 80.65%

Specificity Pr( -|~D) 73.80%

Positive predictive value Pr( D| +) 78.91%

Negative predictive value Pr(~D| -) 75.82%

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

False + rate for true ~D Pr( +|~D) 26.20%

False - rate for true D Pr( -| D) 19.35%

False + rate for classified + Pr(~D| +) 21.09%

False - rate for classified - Pr( D| -) 24.18%

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

Correctly classified 77.56%

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**. summ MR\_indicator pbpp2\_yhat**

Variable | Obs Mean Std. Dev. Min Max

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

MR\_indicator | 6,253 .5525348 .4972722 0 1

pbpp2\_yhat | 6,226 .5091447 .2857790 .0004184 .9999294