**. logit MR\_indicator `part\_sigsub\_lag\_1\_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 = -3080.1072

Iteration 1: log pseudolikelihood = -2914.0314

Iteration 2: log pseudolikelihood = -2903.2526

Iteration 3: log pseudolikelihood = -2903.1676

Iteration 4: log pseudolikelihood = -2903.1676

Logistic regression Number of obs = 6,242

Wald chi2(35) = .

Log pseudolikelihood = -2903.1676 Prob > chi2 = .

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

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

| Robust

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

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

p47\_ss\_1lag | .7258601 .3086376 -0.75 0.451 .3154422 1.670267

p48\_ss\_1lag | 1.117878 .1220713 1.02 0.308 .902493 1.384665

p71\_ss\_1lag | 1.463456 .8309898 0.67 0.502 .4808889 4.453637

p72\_ss\_1lag | 1.460691 .5870725 0.94 0.346 .6644289 3.211207

p75\_ss\_1lag | 1.012566 .0031159 4.06 0.000 1.006477 1.018691

p77\_ss\_1lag | 1.117324 .0686049 1.81 0.071 .9906365 1.260213

mine\_time | .9969206 .0138135 -0.22 0.824 .970211 1.024366

onsite\_insp\_hours | 1.00102 .0001735 5.88 0.000 1.00068 1.00136

|

state |

1 | 1.554208 .6062701 1.13 0.258 .7235522 3.338477

2 | 2.477279 .2318054 9.69 0.000 2.062177 2.97594

3 | .7931716 .2660993 -0.69 0.490 .41096 1.530857

4 | 1.923449 .5866915 2.14 0.032 1.057905 3.497153

5 | .8314895 .2292316 -0.67 0.503 .4843851 1.427325

6 | .7071298 .0638555 -3.84 0.000 .5924253 .8440432

7 | .8686986 .263538 -0.46 0.643 .4793351 1.574342

8 | 1.443547 .1099394 4.82 0.000 1.24338 1.675937

9 | 2.647301 .2309645 11.16 0.000 2.231208 3.140991

10 | .5923538 .2223668 -1.39 0.163 .2838207 1.236284

11 | .6136372 .170265 -1.76 0.078 .3562296 1.057044

12 | 1.003959 .173745 0.02 0.982 .7151662 1.409369

13 | 1.968712 .7184173 1.86 0.063 .9628622 4.025321

14 | .6436121 .196453 -1.44 0.149 .3538406 1.170687

15 | .572748 .0610265 -5.23 0.000 .4648017 .7057638

17 | 1 (empty)

|

time |

2000 | 1.021684 .1437477 0.15 0.879 .7754522 1.346101

2002 | .7533491 .1119597 -1.91 0.057 .5629815 1.008088

2003 | .8107287 .1370193 -1.24 0.214 .5821246 1.129107

2004 | .5270408 .0852662 -3.96 0.000 .3838261 .7236925

2005 | .5405513 .0808522 -4.11 0.000 .4031991 .7246933

2006 | .5803518 .0890797 -3.54 0.000 .4295741 .7840513

2007 | .5753998 .0941024 -3.38 0.001 .4176014 .7928251

2008 | .4659812 .0763407 -4.66 0.000 .338001 .6424197

2009 | .2417449 .0424993 -8.08 0.000 .1712829 .3411934

2010 | .3238721 .0594331 -6.14 0.000 .2260327 .4640618

2011 | .3956667 .0714486 -5.13 0.000 .2777291 .5636864

2012 | .3494511 .0676019 -5.43 0.000 .2391773 .5105671

2013 | .2476429 .0523469 -6.60 0.000 .1636434 .3747601

2014 | .1999399 .0445528 -7.22 0.000 .129189 .3094378

2015 | .2616759 .0584179 -6.01 0.000 .1689418 .405313

|

\_cons | .0000216 2.77e-06 -84.01 0.000 .0000168 .0000278

lnhours | 1 (offset)

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

**. lfit**

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

number of observations = 6242

number of covariate patterns = 6226

Pearson chi2(6187) = 5955.45

Prob > chi2 = 0.9822

**. linktest**

Iteration 0: log likelihood = -4293.1367

Iteration 1: log likelihood = -2902.2438

Iteration 2: log likelihood = -2895.2654

Iteration 3: log likelihood = -2895.14

Iteration 4: log likelihood = -2895.1399

Logistic regression Number of obs = 6,242

LR chi2(2) = 2795.99

Prob > chi2 = 0.0000

Log likelihood = -2895.1399 Pseudo R2 = 0.3256

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

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

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

\_hat | 1.118787 .0318506 35.13 0.000 1.056361 1.181213

\_hatsq | -.0311357 .0151139 -2.06 0.039 -.0607585 -.0015129

\_cons | .0266067 .0363214 0.73 0.464 -.0445819 .0977952

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

**. estat classification**

Logistic model for MR\_indicator

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

Classified | D ~D | Total

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

+ | 2776 738 | 3514

- | 668 2060 | 2728

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

Total | 3444 2798 | 6242

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

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

Sensitivity Pr( +| D) 80.60%

Specificity Pr( -|~D) 73.62%

Positive predictive value Pr( D| +) 79.00%

Negative predictive value Pr(~D| -) 75.51%

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

False + rate for true ~D Pr( +|~D) 26.38%

False - rate for true D Pr( -| D) 19.40%

False + rate for classified + Pr(~D| +) 21.00%

False - rate for classified - Pr( D| -) 24.49%

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

Correctly classified 77.48%

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

**. summ MR\_indicator pbssv2\_yhat**

Variable | Obs Mean Std. Dev. Min Max

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

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

pbssv2\_yhat | 6,242 .5517462 .2922800 .0003875 .999968