**. glm MR `part\_sigandsub\_lag\_all\_vars' `covariates' ib(freq).state ib(freq).time, family(poisson) link(log) vce(cl mineid) exposure(hours) iter(50) eform**

Iteration 0: log pseudolikelihood = -16070.644

Iteration 1: log pseudolikelihood = -15062.428

Iteration 2: log pseudolikelihood = -15051.71

Iteration 3: log pseudolikelihood = -15051.687

Iteration 4: log pseudolikelihood = -15051.683

Iteration 5: log pseudolikelihood = -15051.683

Iteration 6: log pseudolikelihood = -15051.682

Iteration 7: log pseudolikelihood = -15051.682

Iteration 8: log pseudolikelihood = -15051.682

Generalized linear models No. of obs = 19,291

Optimization : ML Residual df = 19,204

Scale parameter = 1

Deviance = 16394.51678 (1/df) Deviance = .8537032

Pearson = 245492.9661 (1/df) Pearson = 12.78343

Variance function: V(u) = u [Poisson]

Link function : g(u) = ln(u) [Log]

AIC = 1.569507

Log pseudolikelihood = -15051.68244 BIC = -173098.9

(Std. Err. adjusted for 1,288 clusters in mineid)

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| Robust

MR | IRR Std. Err. z P>|z| [95% Conf. Interval]

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

p47\_ss\_c\_lag\_all | .8749983 .0902426 -1.29 0.195 .7148566 1.071015

p48\_ss\_c\_lag\_all | 1.008695 .0155084 0.56 0.573 .978753 1.039554

p71\_ss\_c\_lag\_all | .9263997 .0775307 -0.91 0.361 .7862507 1.09153

p72\_ss\_c\_lag\_all | 1.030828 .0518978 0.60 0.546 .9339676 1.137734

p75\_ss\_c\_lag\_all | 1.000083 .0001816 0.46 0.647 .9997273 1.000439

p77\_ss\_c\_lag\_all | 1.004983 .0061542 0.81 0.417 .9929932 1.017118

mine\_time | .9969632 .0025886 -1.17 0.241 .9919026 1.00205

onsite\_insp\_hours | .9997659 .0001555 -1.51 0.132 .9994613 1.000071

|

state |

AL | 1.037235 .0845115 0.45 0.654 .8841441 1.216833

CO | .6618896 .1197576 -2.28 0.023 .4642749 .9436173

IL | 1.170757 .109264 1.69 0.091 .9750483 1.405748

IN | .9245932 .147325 -0.49 0.623 .6765813 1.263518

MD | 1.127706 .1930721 0.70 0.483 .8062388 1.577351

MT | .0000449 .0000451 -9.97 0.000 6.27e-06 .0003214

NM | .7509982 .0533414 -4.03 0.000 .6534018 .8631724

OH | 1.163258 .1832425 0.96 0.337 .8542608 1.584024

OK | .8341331 .2235503 -0.68 0.499 .4932995 1.410457

PA | .8556684 .0848304 -1.57 0.116 .7045599 1.039185

TN | 1.086411 .1608499 0.56 0.576 .8127714 1.452178

UT | .6017336 .0672621 -4.54 0.000 .4833443 .749121

VA | .6254944 .078283 -3.75 0.000 .489432 .7993822

WV | .9494538 .0646039 -0.76 0.446 .8309126 1.084907

WY | .9951401 .0873999 -0.06 0.956 .8377723 1.182068

|

time |

2000.25 | 1.090212 .1038375 0.91 0.364 .9045616 1.313966

2000.5 | 1.269788 .1169825 2.59 0.010 1.060015 1.521074

2000.75 | .9596489 .0958129 -0.41 0.680 .7890908 1.167072

2001 | .9831422 .0948223 -0.18 0.860 .8138034 1.187718

2001.25 | .8708315 .0932372 -1.29 0.196 .7059902 1.074162

2001.5 | 1.082278 .111509 0.77 0.443 .884378 1.324462

2001.75 | .9024648 .0919846 -1.01 0.314 .7390448 1.102021

2002 | .9746922 .0995946 -0.25 0.802 .7977948 1.190814

2002.25 | .8774327 .1050506 -1.09 0.275 .693911 1.109491

2002.5 | 1.050514 .1053183 0.49 0.623 .8631088 1.278611

2002.75 | .9244785 .1005712 -0.72 0.470 .7469597 1.144185

2003 | .8066592 .0897008 -1.93 0.053 .6486884 1.0031

2003.25 | .9377524 .1016597 -0.59 0.553 .7582481 1.159752

2003.5 | .9819147 .1113535 -0.16 0.872 .7862194 1.22632

2003.75 | .7584523 .0812265 -2.58 0.010 .6148495 .9355946

2004 | .9040515 .0991054 -0.92 0.358 .7292584 1.12074

2004.25 | .8630625 .0919474 -1.38 0.167 .7004198 1.063472

2004.5 | .8676103 .0975598 -1.26 0.207 .6960012 1.081532

2004.75 | .7857825 .0958044 -1.98 0.048 .6187596 .9978903

2005 | .6887701 .0777435 -3.30 0.001 .5520733 .859314

2005.25 | .8517167 .0957411 -1.43 0.153 .6833008 1.061643

2005.5 | .8427525 .0926309 -1.56 0.120 .6794233 1.045345

2005.75 | .6473597 .0736095 -3.82 0.000 .5180335 .8089719

2006 | .7208197 .0845621 -2.79 0.005 .5727551 .9071609

2006.25 | .7045076 .0836433 -2.95 0.003 .5582464 .8890893

2006.5 | .8094386 .0937699 -1.82 0.068 .6450242 1.015762

2006.75 | .6414739 .0790456 -3.60 0.000 .5038366 .8167108

2007 | .7092535 .0817118 -2.98 0.003 .5658953 .8889286

2007.25 | .6307383 .0819751 -3.55 0.000 .4889013 .8137241

2007.5 | .7056408 .0778083 -3.16 0.002 .5684927 .8758756

2007.75 | .7245625 .0863142 -2.70 0.007 .5736879 .9151158

2008 | .5871767 .0765971 -4.08 0.000 .4547049 .7582422

2008.25 | .5973377 .0685959 -4.49 0.000 .4769483 .7481153

2008.5 | .7074695 .0871819 -2.81 0.005 .5556658 .9007448

2008.75 | .6402939 .0775436 -3.68 0.000 .5050026 .8118302

2009 | .6097261 .074539 -4.05 0.000 .4798167 .7748082

2009.25 | .565102 .0760398 -4.24 0.000 .4340998 .735638

2009.5 | .6434861 .0859539 -3.30 0.001 .4952672 .8360626

2009.75 | .4799469 .0610375 -5.77 0.000 .3740599 .6158079

2010 | .5244297 .0714826 -4.74 0.000 .4014799 .6850318

2010.25 | .540805 .0707632 -4.70 0.000 .4184685 .6989057

2010.5 | .5919094 .078358 -3.96 0.000 .4566376 .7672533

2010.75 | .5400979 .0675523 -4.93 0.000 .4226776 .6901377

2011 | .6009632 .0797993 -3.83 0.000 .4632554 .7796061

2011.25 | .5530812 .0692164 -4.73 0.000 .4327765 .7068287

2011.5 | .6322701 .0865892 -3.35 0.001 .483427 .8269407

2011.75 | .5207274 .0716752 -4.74 0.000 .3976009 .681983

2012 | .6306523 .0831564 -3.50 0.000 .4870264 .8166341

2012.25 | .5585103 .0689805 -4.72 0.000 .4384307 .7114778

2012.5 | .620062 .078525 -3.77 0.000 .4837695 .7947522

2012.75 | .5556568 .0752673 -4.34 0.000 .4260945 .7246151

2013 | .5806093 .0831667 -3.80 0.000 .4384878 .7687948

2013.25 | .4828636 .0717833 -4.90 0.000 .3608139 .6461979

2013.5 | .7000725 .0959399 -2.60 0.009 .5351702 .9157862

2013.75 | .5392508 .0757038 -4.40 0.000 .409537 .7100491

2014 | .5383865 .082914 -4.02 0.000 .398112 .7280867

2014.25 | .6066353 .086525 -3.50 0.000 .4586908 .8022975

2014.5 | .6117511 .0829434 -3.62 0.000 .4689924 .7979648

2014.75 | .5998249 .0859572 -3.57 0.000 .4529435 .7943372

2015 | .5685847 .0879545 -3.65 0.000 .4198775 .7699594

2015.25 | .582702 .0947402 -3.32 0.001 .4236933 .8013855

2015.5 | .7203409 .1135437 -2.08 0.037 .5288925 .9810897

2015.75 | .4993467 .0842107 -4.12 0.000 .3588013 .6949449

2016 | .6233771 .0908756 -3.24 0.001 .4684498 .8295425

|

\_cons | .0000175 1.33e-06 -144.17 0.000 .0000151 .0000204

ln(hours) | 1 (exposure)

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

**. estat gof**

Deviance goodness-of-fit = 16394.52

Prob > chi2(19203) = 1.0000

Pearson goodness-of-fit = 245495.2

Prob > chi2(19203) = 0.0000

**. glm MR `part\_sigandsub\_lag\_all\_vars' `covariates' ib(freq).state ib(freq).time, family(nbinomial) link(log) vce(cl mineid) exposure(hours) iter(50) eform**

Iteration 0: log pseudolikelihood = -15507.92

Iteration 1: log pseudolikelihood = -15342.241

Iteration 2: log pseudolikelihood = -15341.911

Iteration 3: log pseudolikelihood = -15341.901

Iteration 4: log pseudolikelihood = -15341.901

Iteration 5: log pseudolikelihood = -15341.901

Generalized linear models No. of obs = 19,291

Optimization : ML Residual df = 19,204

Scale parameter = 1

Deviance = 10922.48561 (1/df) Deviance = .568761

Pearson = 223518.4589 (1/df) Pearson = 11.63916

Variance function: V(u) = u+(1)u^2 [Neg. Binomial]

Link function : g(u) = ln(u) [Log]

AIC = 1.599596

Log pseudolikelihood = -15341.90099 BIC = -178570.9

(Std. Err. adjusted for 1,288 clusters in mineid)

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

| Robust

MR | IRR Std. Err. z P>|z| [95% Conf. Interval]

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

p47\_ss\_c\_lag\_all | .9359503 .1412752 -0.44 0.661 .6962573 1.25816

p48\_ss\_c\_lag\_all | 1.012852 .0168663 0.77 0.443 .980328 1.046454

p71\_ss\_c\_lag\_all | .9642225 .0890534 -0.39 0.693 .804567 1.155559

p72\_ss\_c\_lag\_all | .989804 .0466028 -0.22 0.828 .902552 1.085491

p75\_ss\_c\_lag\_all | 1.000089 .0001858 0.48 0.632 .9997249 1.000453

p77\_ss\_c\_lag\_all | 1.004597 .006855 0.67 0.502 .9912505 1.018123

mine\_time | .9973594 .0024395 -1.08 0.280 .9925896 1.002152

onsite\_insp\_hours | .9997715 .0001457 -1.57 0.117 .999486 1.000057

|

state |

AL | 1.102962 .1023008 1.06 0.291 .9196249 1.322849

CO | .7447066 .14391 -1.53 0.127 .5099126 1.087614

IL | 1.188388 .0933773 2.20 0.028 1.018768 1.386249

IN | .9925401 .1631312 -0.05 0.964 .7191953 1.369775

MD | 1.191044 .2248411 0.93 0.354 .8226993 1.724308

MT | .0001544 .0001552 -8.73 0.000 .0000215 .0011068

NM | .8257971 .0531095 -2.98 0.003 .7279976 .9367349

OH | 1.054793 .1607979 0.35 0.726 .7823582 1.422095

OK | .8869083 .2297989 -0.46 0.643 .5337422 1.473757

PA | .957677 .0895289 -0.46 0.644 .7973409 1.150255

TN | 1.168034 .1743694 1.04 0.298 .8717348 1.565045

UT | .6486228 .072723 -3.86 0.000 .5206625 .8080313

VA | .708777 .066417 -3.67 0.000 .5898567 .8516725

WV | 1.083852 .0651527 1.34 0.180 .9633908 1.219376

WY | 1.081165 .0898237 0.94 0.348 .9187002 1.272361

|

time |

2000.25 | 1.053104 .1080579 0.50 0.614 .8612517 1.287692

2000.5 | 1.320134 .1388174 2.64 0.008 1.074264 1.622279

2000.75 | .9542358 .1081135 -0.41 0.679 .7642155 1.191504

2001 | .9864324 .1076762 -0.13 0.900 .796439 1.221749

2001.25 | .9303404 .1100829 -0.61 0.542 .7377736 1.173169

2001.5 | 1.042404 .1124023 0.39 0.700 .8438225 1.287719

2001.75 | .947127 .1050664 -0.49 0.624 .7620492 1.177154

2002 | .9608502 .1069577 -0.36 0.720 .7725091 1.19511

2002.25 | .8684706 .1079292 -1.13 0.256 .6807255 1.107996

2002.5 | 1.050049 .1199898 0.43 0.669 .8393482 1.313642

2002.75 | .9469639 .1067821 -0.48 0.629 .7591887 1.181183

2003 | .8611719 .1037214 -1.24 0.215 .6800946 1.090462

2003.25 | .9601563 .1191806 -0.33 0.743 .7528102 1.224612

2003.5 | .9966641 .1213367 -0.03 0.978 .785093 1.265251

2003.75 | .7198672 .0872682 -2.71 0.007 .5676267 .9129395

2004 | .9095499 .1104505 -0.78 0.435 .7169049 1.153962

2004.25 | .81307 .0933414 -1.80 0.071 .6492455 1.018232

2004.5 | .8595662 .1065757 -1.22 0.222 .6741254 1.096019

2004.75 | .759958 .0953757 -2.19 0.029 .5942412 .9718886

2005 | .7016561 .087479 -2.84 0.004 .5495418 .8958761

2005.25 | .8397138 .1028933 -1.43 0.154 .6604354 1.067658

2005.5 | .7962363 .0964543 -1.88 0.060 .6279561 1.009612

2005.75 | .625673 .0796234 -3.68 0.000 .4875544 .8029189

2006 | .7570054 .0939971 -2.24 0.025 .5934792 .9655892

2006.25 | .7268962 .0909528 -2.55 0.011 .5688083 .9289213

2006.5 | .8368809 .104539 -1.43 0.154 .6551424 1.069034

2006.75 | .6405783 .0812675 -3.51 0.000 .4995556 .8214113

2007 | .6942909 .088046 -2.88 0.004 .5414981 .8901967

2007.25 | .6170314 .0841781 -3.54 0.000 .4722616 .8061797

2007.5 | .7202123 .0904141 -2.61 0.009 .5631217 .9211254

2007.75 | .722507 .0903731 -2.60 0.009 .5654204 .9232357

2008 | .5712803 .0730171 -4.38 0.000 .4446872 .7339118

2008.25 | .5948511 .0757453 -4.08 0.000 .4634689 .763477

2008.5 | .7128424 .0944994 -2.55 0.011 .5497337 .9243464

2008.75 | .6433073 .0835522 -3.40 0.001 .4987296 .8297967

2009 | .5812213 .0766806 -4.11 0.000 .4487892 .7527325

2009.25 | .5825379 .079144 -3.98 0.000 .4463538 .7602721

2009.5 | .6175535 .0878512 -3.39 0.001 .4672888 .8161384

2009.75 | .468295 .0624981 -5.68 0.000 .3605115 .608303

2010 | .4905195 .0658691 -5.30 0.000 .3770103 .6382037

2010.25 | .5352161 .0708806 -4.72 0.000 .4128587 .6938361

2010.5 | .6459004 .093201 -3.03 0.002 .4867885 .8570196

2010.75 | .5495834 .0741109 -4.44 0.000 .421939 .7158426

2011 | .641327 .0844712 -3.37 0.001 .4954104 .8302215

2011.25 | .542316 .0700412 -4.74 0.000 .4210349 .6985328

2011.5 | .6433714 .0871967 -3.25 0.001 .4932847 .8391234

2011.75 | .5005229 .0711613 -4.87 0.000 .378796 .6613671

2012 | .5983426 .0823804 -3.73 0.000 .456831 .7836899

2012.25 | .5221922 .06928 -4.90 0.000 .4026246 .6772679

2012.5 | .6531318 .0878738 -3.17 0.002 .5017395 .8502045

2012.75 | .5394265 .0790733 -4.21 0.000 .4047218 .7189652

2013 | .525004 .0757066 -4.47 0.000 .395747 .6964783

2013.25 | .4357813 .0662889 -5.46 0.000 .3234357 .5871502

2013.5 | .6125357 .0854804 -3.51 0.000 .4659558 .8052265

2013.75 | .5124399 .0751921 -4.56 0.000 .3843644 .6831918

2014 | .4861293 .0767423 -4.57 0.000 .3567614 .6624083

2014.25 | .5599381 .0798818 -4.07 0.000 .4233564 .7405834

2014.5 | .5677608 .0808115 -3.98 0.000 .4295471 .750447

2014.75 | .5654809 .0846954 -3.81 0.000 .4216272 .7584158

2015 | .5424319 .0836017 -3.97 0.000 .4010096 .7337291

2015.25 | .547459 .0904661 -3.65 0.000 .3959978 .756851

2015.5 | .6659752 .0986702 -2.74 0.006 .4981326 .8903713

2015.75 | .479643 .0813118 -4.33 0.000 .3440469 .6686803

2016 | .6001429 .0951386 -3.22 0.001 .4398622 .8188281

|

\_cons | .0000167 1.39e-06 -132.12 0.000 .0000142 .0000196

ln(hours) | 1 (exposure)

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

**. nbreg MR `part\_sigandsub\_lag\_all\_vars' `covariates' ib(freq).state ib(freq).time, vce(cl mineid) exposure(hours) iter(50) irr**

Fitting Poisson model:

Iteration 0: log pseudolikelihood = -15373.84

Iteration 1: log pseudolikelihood = -15057.549

Iteration 2: log pseudolikelihood = -15051.707

Iteration 3: log pseudolikelihood = -15051.683

Iteration 4: log pseudolikelihood = -15051.682

Iteration 5: log pseudolikelihood = -15051.682

Fitting constant-only model:

Iteration 0: log pseudolikelihood = -15596.601

Iteration 1: log pseudolikelihood = -15330.011

Iteration 2: log pseudolikelihood = -15321.501

Iteration 3: log pseudolikelihood = -15321.495

Iteration 4: log pseudolikelihood = -15321.495

Fitting full model:

Iteration 0: log pseudolikelihood = -14971.369

Iteration 1: log pseudolikelihood = -14944.126

Iteration 2: log pseudolikelihood = -14943.151

Iteration 3: log pseudolikelihood = -14943.15

Iteration 4: log pseudolikelihood = -14943.15

Negative binomial regression Number of obs = 19,291

Wald chi2(86) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -14943.15 Pseudo R2 = 0.0247

(Std. Err. adjusted for 1,288 clusters in mineid)

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

| Robust

MR | IRR Std. Err. z P>|z| [95% Conf. Interval]

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

p47\_ss\_c\_lag\_all | .8887878 .1059305 -0.99 0.323 .7036347 1.122662

p48\_ss\_c\_lag\_all | 1.010743 .0160663 0.67 0.501 .9797389 1.042728

p71\_ss\_c\_lag\_all | .9421002 .0838401 -0.67 0.503 .7913094 1.121625

p72\_ss\_c\_lag\_all | 1.012583 .0498129 0.25 0.799 .9195101 1.115076

p75\_ss\_c\_lag\_all | 1.000085 .0001848 0.46 0.645 .9997228 1.000447

p77\_ss\_c\_lag\_all | 1.004954 .0064886 0.77 0.444 .992317 1.017752

mine\_time | .9970898 .0025127 -1.16 0.247 .9921772 1.002027

onsite\_insp\_hours | .9997603 .0001495 -1.60 0.109 .9994672 1.000053

|

state |

AL | 1.060182 .0910682 0.68 0.496 .8959075 1.254577

CO | .6903646 .1291471 -1.98 0.048 .4784577 .9961242

IL | 1.168831 .0993315 1.84 0.066 .9894943 1.38067

IN | .9499322 .1528452 -0.32 0.750 .6930001 1.302123

MD | 1.152816 .2047545 0.80 0.423 .8139095 1.632842

MT | 5.44e-07 5.46e-07 -14.36 0.000 7.59e-08 3.89e-06

NM | .7801296 .0529153 -3.66 0.000 .6830158 .8910514

OH | 1.123732 .1718988 0.76 0.446 .8326328 1.516604

OK | .8532562 .2243007 -0.60 0.546 .509705 1.428368

PA | .8909401 .0864896 -1.19 0.234 .7365745 1.077657

TN | 1.114156 .1639538 0.73 0.463 .8350019 1.486636

UT | .6212671 .0685703 -4.31 0.000 .5004144 .7713064

VA | .6562367 .0744314 -3.71 0.000 .5254313 .8196059

WV | 1.00031 .0653216 0.00 0.996 .8801367 1.136892

WY | 1.019853 .0875887 0.23 0.819 .8618532 1.206818

|

time |

2000.25 | 1.081114 .1034001 0.82 0.415 .8963153 1.304014

2000.5 | 1.293542 .1248888 2.67 0.008 1.07053 1.563012

2000.75 | .961579 .1007576 -0.37 0.708 .7830564 1.180801

2001 | .9872791 .099154 -0.13 0.899 .8108722 1.202064

2001.25 | .8945897 .0977093 -1.02 0.308 .7221935 1.108139

2001.5 | 1.05891 .1069724 0.57 0.571 .8686993 1.290768

2001.75 | .9128664 .0931569 -0.89 0.372 .7473829 1.114991

2002 | .9731828 .099666 -0.27 0.791 .7961975 1.18951

2002.25 | .876847 .1042254 -1.11 0.269 .6946192 1.106881

2002.5 | 1.046214 .1074046 0.44 0.660 .8555315 1.279396

2002.75 | .93856 .1009507 -0.59 0.556 .7601644 1.158822

2003 | .8274975 .0939702 -1.67 0.095 .6623761 1.033781

2003.25 | .9400671 .1033553 -0.56 0.574 .7578335 1.166122

2003.5 | .985653 .1129818 -0.13 0.900 .7873248 1.23394

2003.75 | .7441904 .0830481 -2.65 0.008 .5979902 .9261345

2004 | .9084695 .1002488 -0.87 0.384 .7317808 1.12782

2004.25 | .8526652 .0925896 -1.47 0.142 .6892041 1.054895

2004.5 | .8657128 .0992163 -1.26 0.208 .6915453 1.083745

2004.75 | .7770648 .0946941 -2.07 0.038 .611968 .9867014

2005 | .6968717 .0794865 -3.17 0.002 .5572668 .8714499

2005.25 | .8490609 .0972137 -1.43 0.153 .678391 1.062668

2005.5 | .8243012 .0933763 -1.71 0.088 .66018 1.029223

2005.75 | .6415764 .0748566 -3.80 0.000 .5104269 .8064236

2006 | .738419 .0871161 -2.57 0.010 .5859776 .9305179

2006.25 | .7166588 .0861181 -2.77 0.006 .5662744 .9069806

2006.5 | .8283276 .0975259 -1.60 0.110 .6576322 1.043329

2006.75 | .6443403 .0792382 -3.57 0.000 .5063352 .8199596

2007 | .7072337 .0843939 -2.90 0.004 .559744 .8935861

2007.25 | .6284902 .0831244 -3.51 0.000 .4849738 .8144769

2007.5 | .7089126 .0808104 -3.02 0.003 .5669732 .886386

2007.75 | .7306341 .0881865 -2.60 0.009 .5767148 .925633

2008 | .5860748 .0752076 -4.16 0.000 .4557464 .7536728

2008.25 | .5939058 .0695145 -4.45 0.000 .4721583 .7470464

2008.5 | .7140741 .0896535 -2.68 0.007 .558307 .9133

2008.75 | .6408413 .0792169 -3.60 0.000 .5029561 .8165276

2009 | .6010029 .0752333 -4.07 0.000 .4702443 .768121

2009.25 | .5765961 .0753567 -4.21 0.000 .4462994 .7449329

2009.5 | .6379771 .0856554 -3.35 0.001 .4903678 .8300195

2009.75 | .4782232 .0610774 -5.78 0.000 .3723208 .6142482

2010 | .5163133 .0684492 -4.99 0.000 .3981686 .6695139

2010.25 | .5430475 .0706088 -4.70 0.000 .4208833 .7006705

2010.5 | .6098527 .0819533 -3.68 0.000 .4686392 .7936176

2010.75 | .54347 .0683699 -4.85 0.000 .4247098 .6954388

2011 | .6221428 .0813261 -3.63 0.000 .481528 .8038195

2011.25 | .5494543 .0687564 -4.79 0.000 .4299479 .7021781

2011.5 | .6408944 .0863881 -3.30 0.001 .4920967 .8346847

2011.75 | .5103835 .0692691 -4.96 0.000 .3911756 .6659191

2012 | .6232098 .0820235 -3.59 0.000 .4815082 .8066123

2012.25 | .543293 .0679433 -4.88 0.000 .4251912 .694199

2012.5 | .6346667 .0809777 -3.56 0.000 .4942426 .8149882

2012.75 | .5534586 .0764454 -4.28 0.000 .4221964 .7255307

2013 | .5655354 .079418 -4.06 0.000 .429463 .7447215

2013.25 | .4680646 .0691206 -5.14 0.000 .350434 .6251805

2013.5 | .6705465 .0916242 -2.92 0.003 .5130028 .8764719

2013.75 | .5316889 .0748251 -4.49 0.000 .403522 .7005643

2014 | .52313 .0804194 -4.21 0.000 .3870407 .7070704

2014.25 | .5874475 .0806598 -3.87 0.000 .448843 .7688537

2014.5 | .5986736 .0808237 -3.80 0.000 .4594878 .7800209

2014.75 | .5885438 .0844119 -3.70 0.000 .4443194 .779583

2015 | .5578579 .084762 -3.84 0.000 .4141812 .7513751

2015.25 | .5667959 .0892957 -3.60 0.000 .4162213 .7718432

2015.5 | .6984913 .1045929 -2.40 0.017 .5208361 .9367438

2015.75 | .4919081 .0817716 -4.27 0.000 .3551286 .6813687

2016 | .6208849 .0930341 -3.18 0.001 .4628776 .8328296

|

\_cons | .0000172 1.34e-06 -140.66 0.000 .0000147 .00002

ln(hours) | 1 (exposure)

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

/lnalpha | -1.59755 .1335046 -1.859214 -1.335886

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

alpha | .2023917 .0270202 .155795 .2629251

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

**. lrtest pois nbin, stats force**

Likelihood-ratio test LR chi2(0) = -217.07

(Assumption: nbin nested in pois) Prob > chi2 = .

Akaike's information criterion and Bayesian information criterion

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

Model | Obs ll(null) ll(model) df AIC BIC

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

nbin | 19,291 -15321.5 -14943.15 88 30062.3 30754.63

pois | 19,291 -15581.44 -15051.68 88 30279.36 30971.7

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

Note: N=Obs used in calculating BIC; see [R] BIC note.

**. summ MR pcssv4\_yhat**

Variable | Obs Mean Std. Dev. Min Max

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

MR | 30,289 .4096207 .9550592 0 14

pcssv4\_yhat | 19,291 .5445016 .7736348 1.73e-08 6.717103