**. glm MR `part\_sigandsub\_lag\_4\_vars' `covariates' ib(freq).state ib(freq).time, family(poisson) link(log) vce(cl mineid) exposure(hours) iter(50) eform**

Iteration 0: log pseudolikelihood = -17961.27

Iteration 1: log pseudolikelihood = -16840.594

Iteration 2: log pseudolikelihood = -16829.064

Iteration 3: log pseudolikelihood = -16829.051

Iteration 4: log pseudolikelihood = -16829.051

Generalized linear models No. of obs = 22,446

Optimization : ML Residual df = 22,364

Scale parameter = 1

Deviance = 18705.5754 (1/df) Deviance = .8364146

Pearson = 280891.4678 (1/df) Pearson = 12.55998

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

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

AIC = 1.506821

Log pseudolikelihood = -16829.0506 BIC = -205356.4

(Std. Err. adjusted for 1,293 clusters in mineid)

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

| Robust

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

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

p47\_ss\_c\_4lag | .8971779 .214229 -0.45 0.650 .5618597 1.432614

p48\_ss\_c\_4lag | 1.00334 .0235199 0.14 0.887 .9582849 1.050514

p71\_ss\_c\_4lag | .7469344 .1029453 -2.12 0.034 .5701205 .9785842

p72\_ss\_c\_4lag | 1.014257 .0734714 0.20 0.845 .8800112 1.168982

p75\_ss\_c\_4lag | 1.001937 .0007768 2.50 0.013 1.000416 1.00346

p77\_ss\_c\_4lag | 1.015102 .0198067 0.77 0.442 .9770146 1.054674

mine\_time | .9979339 .0021798 -0.95 0.344 .9936708 1.002215

onsite\_insp\_hours | .9996519 .0001541 -2.26 0.024 .9993499 .9999539

|

state |

AL | 1.00579 .0769875 0.08 0.940 .8656702 1.168589

AR | 1.979868 .1379488 9.80 0.000 1.727142 2.269574

CO | .675347 .1094887 -2.42 0.015 .4915055 .9279521

IL | 1.188314 .1163165 1.76 0.078 .9808725 1.439627

IN | .8916971 .1376744 -0.74 0.458 .6588633 1.206811

MD | .9931083 .1634941 -0.04 0.966 .7192245 1.371288

MT | .8262999 .0465126 -3.39 0.001 .7399858 .9226818

NM | .763587 .0401213 -5.13 0.000 .6888642 .8464151

OH | 1.089668 .1380153 0.68 0.498 .8501242 1.396708

OK | .8354548 .2421209 -0.62 0.535 .4734112 1.474373

PA | .8641097 .0830413 -1.52 0.129 .715761 1.043205

TN | 1.14076 .1816488 0.83 0.408 .8349358 1.558602

UT | .5840303 .0755625 -4.16 0.000 .4532167 .7526011

VA | .6359971 .0680439 -4.23 0.000 .5156881 .7843741

WV | .9419884 .0577166 -0.98 0.329 .8353943 1.062184

WY | 1.021481 .0506241 0.43 0.668 .9269261 1.125681

|

time |

2000.75 | 1.55647 .1984396 3.47 0.001 1.212323 1.998312

2001 | 1.601411 .1967441 3.83 0.000 1.258713 2.037411

2001.25 | 1.393982 .1702643 2.72 0.007 1.097209 1.771026

2001.5 | 1.751279 .2135515 4.60 0.000 1.378986 2.224084

2001.75 | 1.519377 .1767891 3.59 0.000 1.209547 1.90857

2002 | 1.594403 .1969189 3.78 0.000 1.251611 2.031079

2002.25 | 1.432589 .1910366 2.70 0.007 1.103097 1.860501

2002.5 | 1.755503 .2107019 4.69 0.000 1.387514 2.221089

2002.75 | 1.603438 .1858068 4.07 0.000 1.277658 2.012286

2003 | 1.321751 .1554083 2.37 0.018 1.049706 1.664301

2003.25 | 1.528028 .1778604 3.64 0.000 1.216333 1.919597

2003.5 | 1.60533 .1615597 4.70 0.000 1.317952 1.955369

2003.75 | 1.235127 .1444158 1.81 0.071 .9821679 1.553236

2004 | 1.495108 .1638429 3.67 0.000 1.206126 1.853328

2004.25 | 1.47391 .158022 3.62 0.000 1.194569 1.818572

2004.5 | 1.42823 .1608282 3.17 0.002 1.145374 1.780939

2004.75 | 1.29591 .1476269 2.28 0.023 1.036592 1.620099

2005 | 1.09998 .1317901 0.80 0.426 .8697633 1.391132

2005.25 | 1.394672 .1486201 3.12 0.002 1.131789 1.718614

2005.5 | 1.312153 .1506905 2.37 0.018 1.047684 1.643381

2005.75 | 1.160608 .1387134 1.25 0.213 .9182311 1.466964

2006 | 1.180006 .1296593 1.51 0.132 .9513796 1.463573

2006.25 | 1.16858 .134641 1.35 0.176 .9323628 1.464643

2006.5 | 1.335596 .1503845 2.57 0.010 1.071105 1.665398

2006.75 | 1.051566 .1286357 0.41 0.681 .8273916 1.336479

2007 | 1.115882 .1300736 0.94 0.347 .8879681 1.402294

2007.25 | 1.049043 .1274759 0.39 0.694 .82672 1.331154

2007.5 | 1.166837 .1218327 1.48 0.139 .9508979 1.431814

2007.75 | 1.184681 .1278315 1.57 0.116 .9588564 1.46369

2008 | .9858682 .1092009 -0.13 0.898 .7934772 1.224907

2008.25 | 1.03979 .1178352 0.34 0.731 .832688 1.298401

2008.5 | 1.224173 .12551 1.97 0.049 1.001319 1.496626

2009 | .9581439 .0968378 -0.42 0.672 .7859617 1.168046

2009.25 | .8914541 .099152 -1.03 0.302 .716843 1.108598

2009.5 | 1.110892 .1265128 0.92 0.356 .8886564 1.388706

2009.75 | .8292108 .0954731 -1.63 0.104 .6616981 1.03913

2010 | .8823594 .1080262 -1.02 0.307 .694119 1.121649

2010.25 | .9224559 .109944 -0.68 0.498 .730288 1.165191

2010.5 | 1.064263 .1179041 0.56 0.574 .8565426 1.322359

2010.75 | .8422745 .0957252 -1.51 0.131 .6740837 1.052431

2011 | .9364664 .1052444 -0.58 0.559 .7513292 1.167224

2011.25 | .9577008 .1039103 -0.40 0.690 .7742385 1.184636

2011.5 | 1.081272 .1198515 0.70 0.481 .8701322 1.343646

2011.75 | .8828345 .1026935 -1.07 0.284 .7028545 1.108902

2012 | 1.110942 .1204951 0.97 0.332 .8981899 1.374088

2012.25 | .970376 .1039143 -0.28 0.779 .7866612 1.196995

2012.5 | 1.084018 .1162177 0.75 0.452 .8785755 1.3375

2012.75 | .9160361 .116249 -0.69 0.490 .7143176 1.174718

2013 | .9695811 .1108954 -0.27 0.787 .774869 1.213221

2013.25 | .8303576 .1031612 -1.50 0.135 .6509001 1.059293

2013.5 | 1.131044 .1274689 1.09 0.275 .9068784 1.410621

2013.75 | .8841036 .1029791 -1.06 0.290 .7036496 1.110836

2014 | .8574266 .1168286 -1.13 0.259 .6564724 1.119895

2014.25 | .9364357 .1198427 -0.51 0.608 .7286908 1.203407

2014.5 | .9986717 .119853 -0.01 0.991 .789347 1.263507

2014.75 | .9782629 .1135865 -0.19 0.850 .7791521 1.228256

2015 | .8911786 .1047417 -0.98 0.327 .707818 1.122039

2015.25 | .9563885 .1236548 -0.34 0.730 .7423001 1.232222

2015.5 | 1.222269 .1527508 1.61 0.108 .9567304 1.561508

2015.75 | .7507067 .1063893 -2.02 0.043 .5686421 .9910637

2016 | 1.026347 .1270727 0.21 0.834 .8052048 1.308224

|

\_cons | .0000105 1.02e-06 -117.55 0.000 8.66e-06 .0000127

ln(hours) | 1 (exposure)

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

**. estat gof**

Deviance goodness-of-fit = 18705.58

Prob > chi2(22364) = 1.0000

Pearson goodness-of-fit = 280891.5

Prob > chi2(22364) = 0.0000

**. glm MR `part\_sigandsub\_lag\_4\_vars' `covariates' ib(freq).state ib(freq).time, family(nbinomial) link(log) vce(cl mineid) exposure(hours) iter(50) eform**

Iteration 0: log pseudolikelihood = -17242.416

Iteration 1: log pseudolikelihood = -17076.826

Iteration 2: log pseudolikelihood = -17076.576

Iteration 3: log pseudolikelihood = -17076.576

Generalized linear models No. of obs = 22,446

Optimization : ML Residual df = 22,364

Scale parameter = 1

Deviance = 12656.09358 (1/df) Deviance = .5659137

Pearson = 254647.153 (1/df) Pearson = 11.38648

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

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

AIC = 1.528876

Log pseudolikelihood = -17076.57572 BIC = -211405.9

(Std. Err. adjusted for 1,293 clusters in mineid)

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| Robust

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

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

p47\_ss\_c\_4lag | 1.065941 .263031 0.26 0.796 .6571903 1.728921

p48\_ss\_c\_4lag | 1.00669 .0283965 0.24 0.813 .9525444 1.063913

p71\_ss\_c\_4lag | .78089 .1073681 -1.80 0.072 .5964229 1.022411

p72\_ss\_c\_4lag | .9664372 .0806799 -0.41 0.683 .8205665 1.138239

p75\_ss\_c\_4lag | 1.0027 .0007935 3.41 0.001 1.001146 1.004256

p77\_ss\_c\_4lag | 1.009445 .0179591 0.53 0.597 .9748528 1.045265

mine\_time | .9980416 .001822 -1.07 0.283 .994477 1.001619

onsite\_insp\_hours | .9996311 .0001503 -2.45 0.014 .9993367 .9999256

|

state |

AL | 1.081393 .0994756 0.85 0.395 .9029903 1.295043

AR | 1.969958 .1193317 11.19 0.000 1.749423 2.218294

CO | .7409064 .1254047 -1.77 0.076 .531729 1.032372

IL | 1.205739 .0948022 2.38 0.017 1.03354 1.40663

IN | .9360632 .1453435 -0.43 0.670 .6904595 1.269031

MD | 1.05672 .1765525 0.33 0.741 .7616306 1.466139

MT | .9831159 .0464218 -0.36 0.718 .8962141 1.078444

NM | .8223016 .0384021 -4.19 0.000 .7503767 .9011206

OH | .9740919 .1447099 -0.18 0.860 .7280252 1.303327

OK | .8799667 .2512928 -0.45 0.654 .5027915 1.540085

PA | .9904581 .091444 -0.10 0.917 .8265116 1.186925

TN | 1.235028 .1972857 1.32 0.186 .903034 1.689076

UT | .6285428 .0886852 -3.29 0.001 .476687 .8287746

VA | .695237 .0569071 -4.44 0.000 .5921881 .8162179

WV | 1.065593 .0567307 1.19 0.233 .960007 1.182791

WY | 1.11906 .0486147 2.59 0.010 1.02772 1.218517

|

time |

2000.75 | 1.602609 .2201979 3.43 0.001 1.224258 2.097888

2001 | 1.630769 .2094487 3.81 0.000 1.26785 2.097572

2001.25 | 1.529443 .2061727 3.15 0.002 1.174328 1.991945

2001.5 | 1.711274 .2103217 4.37 0.000 1.344943 2.177385

2001.75 | 1.658805 .2107615 3.98 0.000 1.293138 2.127873

2002 | 1.598268 .2035704 3.68 0.000 1.245181 2.051477

2002.25 | 1.437941 .1930342 2.71 0.007 1.105281 1.870722

2002.5 | 1.80628 .2333931 4.58 0.000 1.402167 2.326862

2002.75 | 1.729103 .21735 4.36 0.000 1.351525 2.212167

2003 | 1.444835 .1824455 2.91 0.004 1.128063 1.85056

2003.25 | 1.635451 .2203759 3.65 0.000 1.255852 2.129788

2003.5 | 1.683326 .199885 4.39 0.000 1.333808 2.124435

2003.75 | 1.212807 .1521095 1.54 0.124 .9484936 1.550775

2004 | 1.57406 .2054165 3.48 0.001 1.218817 2.032844

2004.25 | 1.451403 .1738246 3.11 0.002 1.147745 1.8354

2004.5 | 1.444076 .179542 2.96 0.003 1.131775 1.842553

2004.75 | 1.329194 .1688904 2.24 0.025 1.036175 1.705077

2005 | 1.156559 .1530136 1.10 0.272 .8923871 1.498934

2005.25 | 1.455506 .1805478 3.03 0.002 1.141371 1.856099

2005.5 | 1.267998 .1569141 1.92 0.055 .9949076 1.616048

2005.75 | 1.216595 .1633663 1.46 0.144 .9350724 1.582875

2006 | 1.26685 .154309 1.94 0.052 .9978022 1.608444

2006.25 | 1.260895 .16815 1.74 0.082 .9708782 1.637545

2006.5 | 1.420794 .1748645 2.85 0.004 1.11627 1.808393

2006.75 | 1.086497 .1322358 0.68 0.495 .8559144 1.379199

2007 | 1.107194 .1375643 0.82 0.412 .8678912 1.412479

2007.25 | 1.063973 .1334046 0.49 0.621 .832155 1.360371

2007.5 | 1.212727 .1466271 1.60 0.111 .956857 1.537019

2007.75 | 1.212923 .1442699 1.62 0.105 .9607007 1.531365

2008 | .9739923 .1144984 -0.22 0.823 .7735562 1.226363

2008.25 | 1.090284 .1423614 0.66 0.508 .8441043 1.408262

2008.5 | 1.24831 .1409876 1.96 0.050 1.000427 1.557613

2009 | .920603 .1022596 -0.74 0.456 .7404945 1.144519

2009.25 | .8846926 .105257 -1.03 0.303 .7006804 1.11703

2009.5 | 1.090385 .1360119 0.69 0.488 .8538924 1.392376

2009.75 | .8278131 .1055542 -1.48 0.138 .6447565 1.062842

2010 | .8772827 .1098835 -1.05 0.296 .686314 1.121389

2010.25 | .9391941 .1191426 -0.49 0.621 .7324452 1.204302

2010.5 | 1.155113 .1495683 1.11 0.265 .896206 1.488817

2010.75 | .8436663 .1071476 -1.34 0.181 .657758 1.08212

2011 | .9831849 .1176631 -0.14 0.887 .7776197 1.243092

2011.25 | .9638041 .1149987 -0.31 0.757 .762826 1.217733

2011.5 | 1.110361 .129328 0.90 0.369 .8837339 1.395105

2011.75 | .8594046 .101843 -1.28 0.201 .6812817 1.084098

2012 | 1.095393 .123354 0.81 0.418 .8784455 1.36592

2012.25 | .9644113 .1140281 -0.31 0.759 .7649264 1.21592

2012.5 | 1.169461 .140473 1.30 0.192 .9241473 1.479892

2012.75 | .9038585 .1203553 -0.76 0.448 .6962365 1.173395

2013 | .9159362 .1085867 -0.74 0.459 .7260274 1.15552

2013.25 | .7772168 .1024076 -1.91 0.056 .6003247 1.006232

2013.5 | 1.041393 .1264566 0.33 0.738 .8208297 1.321224

2013.75 | .8693551 .1102529 -1.10 0.270 .6780263 1.114674

2014 | .782355 .1049824 -1.83 0.067 .6014272 1.017711

2014.25 | .879111 .1153842 -0.98 0.326 .6797084 1.137011

2014.5 | .9422589 .1216237 -0.46 0.645 .7316442 1.213502

2014.75 | .9249585 .1182488 -0.61 0.542 .7199505 1.188343

2015 | .8511432 .1083615 -1.27 0.206 .6631835 1.092374

2015.25 | .9355824 .131136 -0.48 0.635 .7108424 1.231376

2015.5 | 1.194032 .1515027 1.40 0.162 .9311349 1.531155

2015.75 | .7236087 .1074472 -2.18 0.029 .540892 .9680483

2016 | 1.014368 .1380026 0.10 0.916 .7769468 1.324341

|

\_cons | 9.75e-06 1.00e-06 -112.06 0.000 7.97e-06 .0000119

ln(hours) | 1 (exposure)

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

**. nbreg MR `part\_sigandsub\_lag\_4\_vars' `covariates' ib(freq).state ib(freq).time, vce(cl mineid) exposure(hours) iter(50) irr**

Fitting Poisson model:

Iteration 0: log pseudolikelihood = -17346.04

Iteration 1: log pseudolikelihood = -16835.613

Iteration 2: log pseudolikelihood = -16829.053

Iteration 3: log pseudolikelihood = -16829.051

Iteration 4: log pseudolikelihood = -16829.051

Fitting constant-only model:

Iteration 0: log pseudolikelihood = -17369.994

Iteration 1: log pseudolikelihood = -17118.971

Iteration 2: log pseudolikelihood = -17112.665

Iteration 3: log pseudolikelihood = -17112.657

Iteration 4: log pseudolikelihood = -17112.657

Fitting full model:

Iteration 0: log pseudolikelihood = -16727.346

Iteration 1: log pseudolikelihood = -16702.951

Iteration 2: log pseudolikelihood = -16702.265

Iteration 3: log pseudolikelihood = -16702.264

Negative binomial regression Number of obs = 22,446

Wald chi2(81) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -16702.264 Pseudo R2 = 0.0240

(Std. Err. adjusted for 1,293 clusters in mineid)

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| Robust

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

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

p47\_ss\_c\_4lag | .9587075 .24899 -0.16 0.871 .576258 1.59498

p48\_ss\_c\_4lag | 1.002015 .0251547 0.08 0.936 .9539059 1.05255

p71\_ss\_c\_4lag | .7546203 .1038565 -2.05 0.041 .5762087 .9882736

p72\_ss\_c\_4lag | .9914604 .0750826 -0.11 0.910 .8547015 1.150102

p75\_ss\_c\_4lag | 1.00221 .0007731 2.86 0.004 1.000696 1.003726

p77\_ss\_c\_4lag | 1.013112 .0186255 0.71 0.479 .9772567 1.050283

mine\_time | .9979825 .0019959 -1.01 0.313 .9940783 1.001902

onsite\_insp\_hours | .999637 .0001517 -2.39 0.017 .9993398 .9999343

|

state |

AL | 1.040869 .0865923 0.48 0.630 .8842652 1.225207

AR | 1.990111 .1272713 10.76 0.000 1.755664 2.255866

CO | .6991101 .1154371 -2.17 0.030 .5058191 .9662645

IL | 1.185186 .103093 1.95 0.051 .9994135 1.405491

IN | .9133435 .1410372 -0.59 0.557 .6748276 1.236162

MD | 1.016954 .1691548 0.10 0.919 .7340357 1.408918

MT | .8774761 .0457058 -2.51 0.012 .7923153 .9717902

NM | .7873099 .038682 -4.87 0.000 .7150306 .8668957

OH | 1.045459 .1405577 0.33 0.741 .8032794 1.360654

OK | .8532294 .2435014 -0.56 0.578 .4876892 1.492755

PA | .9122803 .087134 -0.96 0.336 .7565333 1.100091

TN | 1.173736 .1851159 1.02 0.310 .8616342 1.598887

UT | .6003348 .0792666 -3.86 0.000 .4634503 .7776496

VA | .6602827 .0638631 -4.29 0.000 .5462621 .7981027

WV | .9933753 .0573161 -0.12 0.908 .8871568 1.112311

WY | 1.057682 .0489398 1.21 0.226 .9659829 1.158086

|

time |

2000.75 | 1.579957 .2056028 3.51 0.000 1.224269 2.038984

2001 | 1.620736 .1999509 3.91 0.000 1.272621 2.064075

2001.25 | 1.448559 .1815025 2.96 0.003 1.133135 1.851785

2001.5 | 1.721716 .2058135 4.55 0.000 1.362101 2.176276

2001.75 | 1.562783 .186354 3.74 0.000 1.237079 1.974242

2002 | 1.605152 .1974177 3.85 0.000 1.261325 2.042704

2002.25 | 1.439207 .1902615 2.75 0.006 1.110697 1.864881

2002.5 | 1.77053 .2161293 4.68 0.000 1.393788 2.249105

2002.75 | 1.663103 .1976434 4.28 0.000 1.317536 2.099308

2003 | 1.372565 .1646224 2.64 0.008 1.08503 1.736297

2003.25 | 1.556955 .1888213 3.65 0.000 1.227569 1.974724

2003.5 | 1.632203 .1743627 4.59 0.000 1.323864 2.012357

2003.75 | 1.228832 .1468315 1.72 0.085 .9722624 1.553107

2004 | 1.531847 .1793004 3.64 0.000 1.217821 1.926847

2004.25 | 1.482244 .1646401 3.54 0.000 1.192264 1.842752

2004.5 | 1.442436 .1683996 3.14 0.002 1.147418 1.813308

2004.75 | 1.31391 .1546278 2.32 0.020 1.043258 1.654777

2005 | 1.133124 .139392 1.02 0.310 .8903612 1.442077

2005.25 | 1.425535 .1613934 3.13 0.002 1.141847 1.779703

2005.5 | 1.293397 .1526806 2.18 0.029 1.026244 1.630095

2005.75 | 1.189902 .1485772 1.39 0.164 .9315926 1.519836

2006 | 1.224183 .1391823 1.78 0.075 .9796472 1.529758

2006.25 | 1.211183 .1475124 1.57 0.116 .9539819 1.537727

2006.5 | 1.385278 .1603575 2.82 0.005 1.104087 1.738083

2006.75 | 1.07312 .1285819 0.59 0.556 .8485096 1.357187

2007 | 1.120681 .1340701 0.95 0.341 .8864426 1.416817

2007.25 | 1.060018 .1304251 0.47 0.636 .8328776 1.349104

2007.5 | 1.183832 .1311125 1.52 0.128 .9528343 1.470831

2007.75 | 1.204959 .135007 1.66 0.096 .9673895 1.500871

2008 | .9894998 .111621 -0.09 0.925 .7932233 1.234343

2008.25 | 1.056497 .1267264 0.46 0.647 .8351548 1.336502

2008.5 | 1.244586 .1317459 2.07 0.039 1.011395 1.531543

2009 | .9468518 .0991899 -0.52 0.602 .7711028 1.162657

2009.25 | .899008 .1012461 -0.95 0.344 .7209439 1.121052

2009.5 | 1.112738 .1311802 0.91 0.365 .8831715 1.401976

2009.75 | .834815 .0999053 -1.51 0.131 .6602736 1.055496

2010 | .8847769 .1066967 -1.02 0.310 .6985315 1.12068

2010.25 | .9365568 .1129166 -0.54 0.587 .7394493 1.186205

2010.5 | 1.102646 .1295676 0.83 0.406 .8758196 1.388217

2010.75 | .8452039 .0997106 -1.43 0.154 .6707232 1.065074

2011 | .9644355 .1096898 -0.32 0.750 .771724 1.20527

2011.25 | .9636748 .107593 -0.33 0.740 .7742745 1.199406

2011.5 | 1.103563 .123523 0.88 0.379 .886179 1.374273

2011.75 | .8728606 .1000806 -1.19 0.236 .6971844 1.092804

2012 | 1.114161 .1201273 1.00 0.316 .9019294 1.376332

2012.25 | .9657524 .106029 -0.32 0.751 .7787773 1.197618

2012.5 | 1.122431 .1235313 1.05 0.294 .9046462 1.392644

2012.75 | .9165156 .1168406 -0.68 0.494 .7138809 1.176668

2013 | .9556318 .1083054 -0.40 0.689 .7652805 1.19333

2013.25 | .8145549 .1022891 -1.63 0.102 .6368386 1.041865

2013.5 | 1.097261 .126698 0.80 0.421 .8750313 1.375929

2013.75 | .879002 .104798 -1.08 0.279 .6958352 1.110385

2014 | .8324834 .1104607 -1.38 0.167 .6418466 1.079742

2014.25 | .9096247 .1142864 -0.75 0.451 .7110763 1.163612

2014.5 | .9806805 .1193327 -0.16 0.873 .7725922 1.244815

2014.75 | .9609985 .1151088 -0.33 0.740 .7599156 1.21529

2015 | .8748878 .1048715 -1.12 0.265 .6917037 1.106585

2015.25 | .9419131 .1217825 -0.46 0.643 .731066 1.213571

2015.5 | 1.210102 .149017 1.55 0.121 .9506077 1.540431

2015.75 | .7419974 .1055081 -2.10 0.036 .561521 .9804801

2016 | 1.03183 .1321722 0.24 0.807 .8027372 1.326303

|

\_cons | .0000102 1.01e-06 -116.03 0.000 8.37e-06 .0000123

ln(hours) | 1 (exposure)

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

/lnalpha | -1.485014 .1313304 -1.742416 -1.227611

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

alpha | .2264993 .0297462 .1750968 .2929918

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**. lrtest pois nbin, stats force**

Likelihood-ratio test LR chi2(1) = 253.57

(Assumption: pois nested in nbin) Prob > chi2 = 0.0000

Akaike's information criterion and Bayesian information criterion

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

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

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

pois | 22,446 -17381.19 -16829.05 82 33822.1 34479.65

nbin | 22,446 -17112.66 -16702.26 83 33570.53 34236.09

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

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

**. summ MR pcssv3\_yhat**

Variable | Obs Mean Std. Dev. Min Max

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

MR | 30,289 .4096207 .9550592 0 14

pcssv3\_yhat | 22,446 .4979243 .7248606 .0000155 9.25183