**. glm MR `part\_count\_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 = -17969.67

Iteration 1: log pseudolikelihood = -16844.738

Iteration 2: log pseudolikelihood = -16833.315

Iteration 3: log pseudolikelihood = -16833.303

Iteration 4: log pseudolikelihood = -16833.303

Generalized linear models No. of obs = 22,446

Optimization : ML Residual df = 22,364

Scale parameter = 1

Deviance = 18714.07945 (1/df) Deviance = .8367948

Pearson = 278265.8643 (1/df) Pearson = 12.44258

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

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

AIC = 1.5072

Log pseudolikelihood = -16833.30262 BIC = -205347.9

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

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

| Robust

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

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

p47\_c\_4lag | 1.001854 .0645147 0.03 0.977 .883062 1.136627

p48\_c\_4lag | 1.002574 .0074935 0.34 0.731 .9879945 1.017369

p71\_c\_4lag | .9771775 .054376 -0.41 0.678 .8762085 1.089781

p72\_c\_4lag | 1.017783 .0217443 0.83 0.409 .976045 1.061306

p75\_c\_4lag | 1.00071 .0002652 2.68 0.007 1.00019 1.00123

p77\_c\_4lag | .9913506 .0051024 -1.69 0.091 .9814004 1.001402

mine\_time | .9979458 .0021658 -0.95 0.343 .99371 1.0022

onsite\_insp\_hours | .9996402 .0001524 -2.36 0.018 .9993416 .9999389

|

state |

AL | 1.052169 .0833339 0.64 0.521 .900883 1.22886

AR | 2.129382 .1327542 12.12 0.000 1.884457 2.40614

CO | .6952229 .1170597 -2.16 0.031 .4998057 .9670457

IL | 1.157107 .1103156 1.53 0.126 .9598912 1.394841

IN | .8869029 .1392495 -0.76 0.445 .6519765 1.20648

MD | 1.008818 .1648313 0.05 0.957 .7323772 1.389605

MT | .8653992 .05013 -2.50 0.013 .7725186 .969447

NM | .7788858 .0394639 -4.93 0.000 .7052544 .8602046

OH | 1.118963 .1384992 0.91 0.364 .8779274 1.426175

OK | .87 .2506483 -0.48 0.629 .4946372 1.530212

PA | .88791 .090924 -1.16 0.246 .726447 1.08526

TN | 1.164175 .1833424 0.97 0.334 .8549977 1.585154

UT | .5919253 .0719204 -4.32 0.000 .4664915 .7510866

VA | .6571572 .0638515 -4.32 0.000 .543205 .7950139

WV | .9515939 .0561124 -0.84 0.400 .8477329 1.068179

WY | 1.059439 .0548589 1.12 0.265 .9571936 1.172606

|

time |

2000.75 | 1.575321 .2015897 3.55 0.000 1.225866 2.024394

2001 | 1.624757 .2026333 3.89 0.000 1.272418 2.07466

2001.25 | 1.41539 .1729377 2.84 0.004 1.113969 1.79837

2001.5 | 1.778691 .2193362 4.67 0.000 1.396806 2.264983

2001.75 | 1.547819 .1797875 3.76 0.000 1.232675 1.943533

2002 | 1.62061 .2010331 3.89 0.000 1.270834 2.066655

2002.25 | 1.451587 .1972344 2.74 0.006 1.112208 1.894524

2002.5 | 1.774532 .2142907 4.75 0.000 1.400534 2.248403

2002.75 | 1.617735 .19001 4.10 0.000 1.28508 2.036501

2003 | 1.336998 .1570152 2.47 0.013 1.062104 1.683041

2003.25 | 1.555121 .1814528 3.78 0.000 1.237216 1.954714

2003.5 | 1.635192 .1662494 4.84 0.000 1.339761 1.995768

2003.75 | 1.262434 .1450138 2.03 0.042 1.007934 1.581193

2004 | 1.525628 .1674821 3.85 0.000 1.230281 1.891876

2004.25 | 1.497178 .1594029 3.79 0.000 1.215198 1.84459

2004.5 | 1.45685 .1651251 3.32 0.001 1.166638 1.819254

2004.75 | 1.331393 .1503502 2.53 0.011 1.067044 1.66123

2005 | 1.135069 .1354808 1.06 0.288 .8983047 1.434237

2005.25 | 1.436725 .1507907 3.45 0.001 1.169597 1.764863

2005.5 | 1.343488 .1546886 2.56 0.010 1.072079 1.683607

2005.75 | 1.182306 .1378388 1.44 0.151 .9407902 1.485822

2006 | 1.201089 .1309547 1.68 0.093 .969993 1.487242

2006.25 | 1.192375 .1349728 1.55 0.120 .955124 1.488559

2006.5 | 1.370864 .1515211 2.85 0.004 1.103854 1.702462

2006.75 | 1.080408 .1278077 0.65 0.513 .8568287 1.362327

2007 | 1.148368 .1320488 1.20 0.229 .916649 1.438664

2007.25 | 1.070911 .1303601 0.56 0.574 .8436035 1.359467

2007.5 | 1.181278 .1236002 1.59 0.111 .962252 1.450159

2007.75 | 1.192172 .130524 1.61 0.108 .9619354 1.477516

2008 | .9817146 .1102699 -0.16 0.869 .7877258 1.223476

2008.25 | 1.034763 .1170545 0.30 0.763 .8289937 1.291607

2008.5 | 1.216692 .1267516 1.88 0.060 .9919845 1.492301

2009 | .9551719 .0968414 -0.45 0.651 .7830353 1.16515

2009.25 | .8905729 .0981742 -1.05 0.293 .7175224 1.105359

2009.5 | 1.103418 .1249779 0.87 0.385 .8837497 1.377688

2009.75 | .821947 .0940104 -1.71 0.086 .656882 1.02849

2010 | .8783817 .1057243 -1.08 0.281 .6937938 1.11208

2010.25 | .9195077 .1088808 -0.71 0.479 .7290593 1.159706

2010.5 | 1.05848 .1162955 0.52 0.605 .8534158 1.312817

2010.75 | .832472 .095005 -1.61 0.108 .6656212 1.041147

2011 | .9237007 .1037863 -0.71 0.480 .7411241 1.151255

2011.25 | .9440409 .1031003 -0.53 0.598 .7621311 1.16937

2011.5 | 1.06675 .1180994 0.58 0.559 .8586702 1.325252

2011.75 | .8718696 .1014411 -1.18 0.239 .6940889 1.095186

2012 | 1.094578 .1221691 0.81 0.418 .8795114 1.362234

2012.25 | .950654 .1045863 -0.46 0.646 .7662622 1.179417

2012.5 | 1.061972 .1151507 0.55 0.579 .8586502 1.313438

2012.75 | .8994977 .115199 -0.83 0.408 .69982 1.156149

2013 | .9572544 .1108497 -0.38 0.706 .7628841 1.201147

2013.25 | .817528 .1050891 -1.57 0.117 .6354552 1.051769

2013.5 | 1.107088 .1295003 0.87 0.384 .8802658 1.392356

2013.75 | .8629979 .1014606 -1.25 0.210 .6853873 1.086634

2014 | .8352453 .1180594 -1.27 0.203 .6331393 1.101866

2014.25 | .9145676 .1188115 -0.69 0.492 .7089836 1.179765

2014.5 | .9769892 .1180607 -0.19 0.847 .7709557 1.238084

2014.75 | .9564147 .1132534 -0.38 0.707 .7583185 1.20626

2015 | .871806 .1000448 -1.20 0.232 .6962088 1.091692

2015.25 | .9335366 .120362 -0.53 0.594 .7250783 1.201926

2015.5 | 1.193356 .1483479 1.42 0.155 .9353107 1.522595

2015.75 | .7292464 .1023162 -2.25 0.024 .5539203 .9600664

2016 | .9972562 .1264195 -0.02 0.983 .7778615 1.278531

|

\_cons | .0000104 1.01e-06 -118.09 0.000 8.57e-06 .0000125

ln(hours) | 1 (exposure)

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

**. estat gof**

Deviance goodness-of-fit = 18714.08

Prob > chi2(22364) = 1.0000

Pearson goodness-of-fit = 278265.9

Prob > chi2(22364) = 0.0000

**. glm MR `part\_count\_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 = -17246.361

Iteration 1: log pseudolikelihood = -17079.096

Iteration 2: log pseudolikelihood = -17078.838

Iteration 3: log pseudolikelihood = -17078.838

Generalized linear models No. of obs = 22,446

Optimization : ML Residual df = 22,364

Scale parameter = 1

Deviance = 12660.61837 (1/df) Deviance = .566116

Pearson = 252633.5953 (1/df) Pearson = 11.29644

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

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

AIC = 1.529078

Log pseudolikelihood = -17078.83812 BIC = -211401.3

(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\_c\_4lag | 1.036433 .0697197 0.53 0.595 .9084099 1.182499

p48\_c\_4lag | 1.000136 .0075588 0.02 0.986 .9854306 1.015062

p71\_c\_4lag | 1.002229 .0490454 0.05 0.964 .9105673 1.103117

p72\_c\_4lag | 1.002518 .0259229 0.10 0.923 .952976 1.054635

p75\_c\_4lag | 1.000957 .0002807 3.41 0.001 1.000407 1.001508

p77\_c\_4lag | .9912742 .0057767 -1.50 0.133 .9800166 1.002661

mine\_time | .9978664 .001809 -1.18 0.239 .9943271 1.001418

onsite\_insp\_hours | .9995962 .0001512 -2.67 0.008 .9992998 .9998927

|

state |

AL | 1.126771 .105801 1.27 0.204 .937368 1.354445

AR | 2.109978 .1211006 13.01 0.000 1.885488 2.361196

CO | .7537316 .1303048 -1.64 0.102 .5371076 1.057723

IL | 1.173093 .0919336 2.04 0.042 1.006063 1.367854

IN | .9240889 .1447214 -0.50 0.614 .6798407 1.256089

MD | 1.068979 .1773953 0.40 0.688 .7721712 1.479873

MT | 1.024175 .0532147 0.46 0.646 .925011 1.13397

NM | .8305984 .0409311 -3.77 0.000 .7541274 .9148239

OH | .9933295 .1470267 -0.05 0.964 .7431963 1.327649

OK | .9146552 .2594367 -0.31 0.753 .5245887 1.594762

PA | 1.013571 .0932423 0.15 0.884 .8463476 1.213834

TN | 1.2521 .1996814 1.41 0.159 .9159923 1.711537

UT | .6344459 .0842256 -3.43 0.001 .4890956 .8229917

VA | .7102935 .0549995 -4.42 0.000 .6102777 .8267005

WV | 1.072237 .0561105 1.33 0.183 .967714 1.188049

WY | 1.149467 .0583411 2.74 0.006 1.040624 1.269695

|

time |

2000.75 | 1.627989 .224862 3.53 0.000 1.241885 2.134134

2001 | 1.666228 .2159347 3.94 0.000 1.292478 2.148057

2001.25 | 1.564469 .2110218 3.32 0.001 1.201029 2.037889

2001.5 | 1.748762 .2157358 4.53 0.000 1.373164 2.227097

2001.75 | 1.693227 .2149181 4.15 0.000 1.320304 2.171484

2002 | 1.628792 .2079594 3.82 0.000 1.268197 2.091918

2002.25 | 1.468737 .1974756 2.86 0.004 1.12849 1.911571

2002.5 | 1.834624 .2376881 4.68 0.000 1.423207 2.364972

2002.75 | 1.76077 .2224264 4.48 0.000 1.374599 2.255429

2003 | 1.466468 .185374 3.03 0.002 1.144652 1.878761

2003.25 | 1.662074 .2236083 3.78 0.000 1.276831 2.163552

2003.5 | 1.712837 .2027083 4.55 0.000 1.358248 2.159995

2003.75 | 1.228584 .1532735 1.65 0.099 .9620821 1.568908

2004 | 1.605194 .2086422 3.64 0.000 1.244196 2.070934

2004.25 | 1.48294 .1787988 3.27 0.001 1.17083 1.87825

2004.5 | 1.471233 .1823565 3.12 0.002 1.153922 1.875799

2004.75 | 1.356487 .1701563 2.43 0.015 1.060821 1.734561

2005 | 1.182597 .1567045 1.27 0.206 .9121053 1.533304

2005.25 | 1.490025 .1835603 3.24 0.001 1.170393 1.896948

2005.5 | 1.295914 .1600848 2.10 0.036 1.017248 1.650918

2005.75 | 1.241505 .1665295 1.61 0.107 .9544924 1.614822

2006 | 1.291757 .156738 2.11 0.035 1.018354 1.638563

2006.25 | 1.287993 .1708625 1.91 0.056 .993104 1.670445

2006.5 | 1.464259 .1809488 3.09 0.002 1.149288 1.86555

2006.75 | 1.117443 .1338421 0.93 0.354 .8836337 1.413117

2007 | 1.143132 .140667 1.09 0.277 .8981575 1.454923

2007.25 | 1.095131 .13769 0.72 0.470 .8559436 1.401158

2007.5 | 1.238927 .1500954 1.77 0.077 .9770641 1.570972

2007.75 | 1.234651 .1478228 1.76 0.078 .9764074 1.561195

2008 | .9875936 .1164967 -0.11 0.916 .7837372 1.244475

2008.25 | 1.097559 .1438593 0.71 0.478 .8489053 1.419047

2008.5 | 1.255791 .1423684 2.01 0.045 1.005581 1.568258

2009 | .9172614 .1020193 -0.78 0.437 .7376003 1.140684

2009.25 | .8785077 .1050519 -1.08 0.279 .6949587 1.110535

2009.5 | 1.081997 .1350623 0.63 0.528 .8471754 1.381907

2009.75 | .8178115 .103942 -1.58 0.114 .6374812 1.049154

2010 | .8651395 .1079466 -1.16 0.246 .6774521 1.104825

2010.25 | .9300246 .1182656 -0.57 0.568 .7248569 1.193264

2010.5 | 1.149758 .1493708 1.07 0.283 .8912972 1.483168

2010.75 | .8393372 .107477 -1.37 0.171 .6530407 1.078779

2011 | .9771228 .1169925 -0.19 0.847 .7727401 1.235563

2011.25 | .9594488 .114942 -0.35 0.730 .7586612 1.213377

2011.5 | 1.105238 .1297555 0.85 0.394 .8780607 1.391193

2011.75 | .852953 .1015522 -1.34 0.182 .6754317 1.077131

2012 | 1.090414 .1244895 0.76 0.448 .8717904 1.363863

2012.25 | .9552065 .1144569 -0.38 0.702 .7552708 1.208069

2012.5 | 1.149694 .1391809 1.15 0.249 .9068525 1.457565

2012.75 | .886413 .1185443 -0.90 0.367 .6820258 1.15205

2013 | .9008299 .1074215 -0.88 0.381 .7130818 1.13801

2013.25 | .7695327 .1028791 -1.96 0.050 .5921472 1.000056

2013.5 | 1.027201 .1262677 0.22 0.827 .8072761 1.307039

2013.75 | .8546938 .1089101 -1.23 0.218 .6658026 1.097174

2014 | .7726928 .1049017 -1.90 0.058 .5921705 1.008247

2014.25 | .8685824 .1150524 -1.06 0.287 .6699786 1.126059

2014.5 | .9312285 .1199162 -0.55 0.580 .7235113 1.198581

2014.75 | .9118954 .1173312 -0.72 0.473 .7086359 1.173456

2015 | .8365113 .1055699 -1.41 0.157 .6532027 1.071262

2015.25 | .9147458 .1282158 -0.64 0.525 .6950104 1.203953

2015.5 | 1.166957 .1478849 1.22 0.223 .9103001 1.495977

2015.75 | .7048703 .10466 -2.36 0.018 .5268922 .9429674

2016 | .9938636 .1358111 -0.05 0.964 .7603445 1.299102

|

\_cons | 9.69e-06 9.98e-07 -112.11 0.000 7.92e-06 .0000119

ln(hours) | 1 (exposure)

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

**. nbreg MR `part\_count\_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 = -17519.234

Iteration 1: log pseudolikelihood = -16843.732

Iteration 2: log pseudolikelihood = -16833.427

Iteration 3: log pseudolikelihood = -16833.303

Iteration 4: log pseudolikelihood = -16833.303

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 = -16729.969

Iteration 1: log pseudolikelihood = -16706.277

Iteration 2: log pseudolikelihood = -16705.629

Iteration 3: log pseudolikelihood = -16705.629

Negative binomial regression Number of obs = 22,446

Wald chi2(81) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -16705.629 Pseudo R2 = 0.0238

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

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

| Robust

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

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

p47\_c\_4lag | 1.015736 .0677 0.23 0.815 .8913482 1.157483

p48\_c\_4lag | 1.000873 .0072148 0.12 0.904 .986832 1.015114

p71\_c\_4lag | .9868423 .0509057 -0.26 0.797 .8919469 1.091834

p72\_c\_4lag | 1.009478 .0230125 0.41 0.679 .9653675 1.055605

p75\_c\_4lag | 1.000799 .0002716 2.94 0.003 1.000267 1.001332

p77\_c\_4lag | .9912616 .0055441 -1.57 0.117 .9804547 1.002188

mine\_time | .9978748 .0019806 -1.07 0.284 .9940005 1.001764

onsite\_insp\_hours | .9996185 .000152 -2.51 0.012 .9993206 .9999165

|

state |

AL | 1.086249 .0932339 0.96 0.335 .9180578 1.285254

AR | 2.138294 .1267926 12.82 0.000 1.903682 2.401819

CO | .7179486 .1228672 -1.94 0.053 .5133597 1.004072

IL | 1.154094 .0985364 1.68 0.093 .9762607 1.364322

IN | .9061346 .1421046 -0.63 0.530 .6663509 1.232204

MD | 1.032027 .170225 0.19 0.848 .7469504 1.425904

MT | .9204643 .0517869 -1.47 0.141 .82436 1.027772

NM | .8012719 .0400032 -4.44 0.000 .7265808 .883641

OH | 1.070769 .1419852 0.52 0.606 .8257061 1.388565

OK | .8881988 .2523045 -0.42 0.676 .508997 1.549905

PA | .9382848 .0923734 -0.65 0.518 .7736322 1.137981

TN | 1.194881 .187451 1.13 0.256 .8785969 1.625024

UT | .6081719 .0755416 -4.00 0.000 .4767578 .7758091

VA | .6798466 .0603985 -4.34 0.000 .571201 .8091571

WV | 1.002785 .0562717 0.05 0.960 .8983428 1.119369

WY | 1.094373 .0558749 1.77 0.077 .9901608 1.209552

|

time |

2000.75 | 1.600341 .2092547 3.60 0.000 1.238547 2.067819

2001 | 1.649565 .2065447 4.00 0.000 1.290593 2.108385

2001.25 | 1.476014 .1854188 3.10 0.002 1.153882 1.888076

2001.5 | 1.753709 .2115825 4.66 0.000 1.384399 2.221538

2001.75 | 1.593649 .1897107 3.91 0.000 1.262014 2.012432

2002 | 1.633008 .201727 3.97 0.000 1.281854 2.080358

2002.25 | 1.466342 .1963641 2.86 0.004 1.12784 1.906441

2002.5 | 1.795313 .2204793 4.76 0.000 1.411255 2.283888

2002.75 | 1.687331 .2031347 4.35 0.000 1.332679 2.136362

2003 | 1.390429 .1672628 2.74 0.006 1.09838 1.76013

2003.25 | 1.583106 .1924859 3.78 0.000 1.247425 2.009118

2003.5 | 1.66159 .1779387 4.74 0.000 1.347005 2.049644

2003.75 | 1.247536 .1477841 1.87 0.062 .9890518 1.573574

2004 | 1.560167 .182434 3.80 0.000 1.240618 1.962023

2004.25 | 1.505742 .1675105 3.68 0.000 1.210755 1.872599

2004.5 | 1.469474 .1717647 3.29 0.001 1.168601 1.847812

2004.75 | 1.345416 .1567934 2.55 0.011 1.070677 1.690655

2005 | 1.161136 .1430287 1.21 0.225 .9120783 1.478203

2005.25 | 1.461138 .1638164 3.38 0.001 1.172893 1.820222

2005.5 | 1.321224 .1558091 2.36 0.018 1.048567 1.66478

2005.75 | 1.210603 .1499076 1.54 0.123 .9497267 1.543139

2006 | 1.247314 .1415335 1.95 0.051 .9985945 1.557981

2006.25 | 1.235717 .1491057 1.75 0.079 .9754613 1.565409

2006.5 | 1.421968 .164387 3.05 0.002 1.13367 1.783583

2006.75 | 1.102262 .1289525 0.83 0.405 .8764029 1.386328

2007 | 1.154983 .1366501 1.22 0.223 .9159397 1.456412

2007.25 | 1.086319 .1342777 0.67 0.503 .8525936 1.384117

2007.5 | 1.204218 .1339244 1.67 0.095 .9683681 1.497509

2007.75 | 1.220099 .1381311 1.76 0.079 .9773001 1.523218

2008 | .9950494 .1133118 -0.04 0.965 .7960009 1.243872

2008.25 | 1.056539 .1269787 0.46 0.647 .8348049 1.337168

2008.5 | 1.246038 .133127 2.06 0.040 1.010622 1.536292

2009 | .9439763 .0991562 -0.55 0.583 .768334 1.159771

2009.25 | .894704 .10108 -0.98 0.325 .7169917 1.116464

2009.5 | 1.104854 .1301699 0.85 0.397 .87704 1.391844

2009.75 | .8272285 .0983306 -1.60 0.111 .6553077 1.044253

2010 | .8762021 .1049717 -1.10 0.270 .6928317 1.108105

2010.25 | .930653 .1121077 -0.60 0.551 .7349384 1.178487

2010.5 | 1.09715 .1288289 0.79 0.430 .8715992 1.381069

2010.75 | .8372059 .0993047 -1.50 0.134 .6635406 1.056324

2011 | .9548778 .1085732 -0.41 0.685 .7641224 1.193253

2011.25 | .9542867 .1068815 -0.42 0.676 .7662016 1.188542

2011.5 | 1.092476 .1227219 0.79 0.431 .8765835 1.361541

2011.75 | .8641839 .0993068 -1.27 0.204 .6899081 1.082483

2012 | 1.103365 .1215344 0.89 0.372 .8891194 1.369235

2012.25 | .9508094 .1064926 -0.45 0.652 .7634087 1.184213

2012.5 | 1.100964 .1223632 0.87 0.387 .8854598 1.368917

2012.75 | .8994583 .1154925 -0.83 0.409 .6993342 1.156851

2013 | .9416271 .1077594 -0.53 0.599 .7524329 1.178393

2013.25 | .8042664 .1036516 -1.69 0.091 .6247402 1.035381

2013.5 | 1.078876 .1278368 0.64 0.522 .8552871 1.360915

2013.75 | .861718 .1033733 -1.24 0.215 .6811668 1.090126

2014 | .8176414 .1112596 -1.48 0.139 .626234 1.067552

2014.25 | .8943298 .1138028 -0.88 0.380 .69692 1.147658

2014.5 | .9647176 .1175197 -0.29 0.768 .7598165 1.224875

2014.75 | .9447722 .1145606 -0.47 0.639 .7449251 1.198234

2015 | .8581637 .1010831 -1.30 0.194 .681251 1.081019

2015.25 | .9211343 .1188966 -0.64 0.524 .715242 1.186295

2015.5 | 1.182432 .1449772 1.37 0.172 .929846 1.503632

2015.75 | .7213802 .1018618 -2.31 0.021 .5469797 .9513871

2016 | 1.007567 .1309567 0.06 0.954 .780981 1.299892

|

\_cons | .0000101 9.98e-07 -116.11 0.000 8.29e-06 .0000122

ln(hours) | 1 (exposure)

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

/lnalpha | -1.47969 .1330121 -1.740389 -1.218991

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

alpha | .2277082 .0302879 .1754521 .2955281

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**. lrtest pois nbin, stats force**

Likelihood-ratio test LR chi2(1) = 255.35

(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 -16833.3 82 33830.61 34488.15

nbin | 22,446 -17112.66 -16705.63 83 33577.26 34242.82

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

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

**. summ MR pcv3\_yhat**

Variable | Obs Mean Std. Dev. Min Max

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

MR | 30,289 .4096207 .9550592 0 14

pcv3\_yhat | 22,446 .4980165 .7249006 .000016 7.287406