. glm MR `part\_count\_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 = -16061.799

Iteration 1: log pseudolikelihood = -15048.036

Iteration 2: log pseudolikelihood = -15037.244

Iteration 3: log pseudolikelihood = -15037.223

Iteration 4: log pseudolikelihood = -15037.219

Iteration 5: log pseudolikelihood = -15037.219

Iteration 6: log pseudolikelihood = -15037.219

Iteration 7: log pseudolikelihood = -15037.219

Generalized linear models No. of obs = 19,291

Optimization : ML Residual df = 19,204

Scale parameter = 1

Deviance = 16365.58896 (1/df) Deviance = .8521969

Pearson = 247154.9719 (1/df) Pearson = 12.86997

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

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

AIC = 1.568008

Log pseudolikelihood = -15037.21852 BIC = -173127.8

(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\_c\_lag\_all | 1.053742 .041221 1.34 0.181 .9759702 1.137712

p48\_c\_lag\_all | 1.003421 .0045403 0.75 0.450 .9945611 1.012359

p71\_c\_lag\_all | .9698967 .0182447 -1.62 0.104 .9347888 1.006323

p72\_c\_lag\_all | 1.010777 .0125323 0.86 0.387 .98651 1.035641

p75\_c\_lag\_all | 1.000114 .0000453 2.51 0.012 1.000025 1.000203

p77\_c\_lag\_all | .9967324 .0017227 -1.89 0.058 .9933618 1.000114

mine\_time | .9962978 .0023697 -1.56 0.119 .991664 1.000953

onsite\_insp\_hours | .9998353 .000129 -1.28 0.202 .9995826 1.000088

|

state |

AL | 1.078337 .0786439 1.03 0.301 .9347073 1.244036

CO | .7577408 .1538085 -1.37 0.172 .5090275 1.127977

IL | 1.150958 .1047104 1.55 0.122 .9629855 1.375621

IN | .9416301 .150052 -0.38 0.706 .6890304 1.286833

MD | 1.15037 .2175591 0.74 0.459 .7940681 1.666548

MT | .0002355 .0002365 -8.32 0.000 .0000329 .001686

NM | .801454 .045747 -3.88 0.000 .7166251 .8963243

OH | 1.237557 .173425 1.52 0.128 .9403337 1.628727

OK | .9057672 .2507103 -0.36 0.721 .5265138 1.558201

PA | .885451 .0975395 -1.10 0.269 .7135064 1.098832

TN | 1.119283 .1662602 0.76 0.448 .8365675 1.497541

UT | .6384481 .0604998 -4.74 0.000 .530231 .7687517

VA | .6612741 .0767978 -3.56 0.000 .5266551 .8303032

WV | .9786653 .0634932 -0.33 0.740 .8618081 1.111368

WY | 1.189645 .0885561 2.33 0.020 1.028146 1.376512

|

time |

2000.25 | 1.089663 .1037489 0.90 0.367 .9041652 1.313218

2000.5 | 1.268261 .1170932 2.57 0.010 1.058329 1.519835

2000.75 | .9618844 .095852 -0.39 0.697 .7912259 1.169352

2001 | .9850193 .0949298 -0.16 0.876 .8154764 1.189811

2001.25 | .8724627 .0935184 -1.27 0.203 .7071433 1.076431

2001.5 | 1.08439 .111513 0.79 0.431 .8864461 1.326535

2001.75 | .9069433 .0925332 -0.96 0.338 .7425643 1.10771

2002 | .9778059 .100354 -0.22 0.827 .799636 1.195675

2002.25 | .8809434 .1056651 -1.06 0.291 .6963864 1.114412

2002.5 | 1.052607 .105941 0.51 0.610 .8641639 1.282144

2002.75 | .9275487 .1014139 -0.69 0.492 .7486352 1.14922

2003 | .8086202 .090394 -1.90 0.057 .649517 1.006697

2003.25 | .9432686 .1025226 -0.54 0.591 .7622887 1.167216

2003.5 | .9905257 .1127354 -0.08 0.933 .7924782 1.238067

2003.75 | .7669869 .0811151 -2.51 0.012 .6233995 .9436466

2004 | .9123487 .1009679 -0.83 0.407 .7344462 1.133344

2004.25 | .871861 .0929025 -1.29 0.198 .7075321 1.074356

2004.5 | .8756119 .0996801 -1.17 0.243 .7005038 1.094493

2004.75 | .7936306 .0965555 -1.90 0.057 .6252571 1.007345

2005 | .6957792 .0778453 -3.24 0.001 .5587753 .8663746

2005.25 | .8558169 .0962469 -1.38 0.166 .6865197 1.066863

2005.5 | .8452928 .0917215 -1.55 0.121 .683352 1.04561

2005.75 | .6523669 .0741653 -3.76 0.000 .5220617 .8151959

2006 | .725522 .085499 -2.72 0.006 .5758918 .9140297

2006.25 | .7127744 .0862156 -2.80 0.005 .5623318 .9034654

2006.5 | .8183866 .0954256 -1.72 0.086 .6511883 1.028515

2006.75 | .6516393 .080393 -3.47 0.001 .511675 .8298896

2007 | .7220641 .0838394 -2.80 0.005 .5750983 .9065868

2007.25 | .6417843 .0843839 -3.37 0.001 .495987 .8304393

2007.5 | .7178306 .0790606 -3.01 0.003 .5784583 .8907828

2007.75 | .7275358 .088106 -2.63 0.009 .5738153 .9224367

2008 | .5876178 .0767173 -4.07 0.000 .4549515 .7589703

2008.25 | .5968871 .0697693 -4.41 0.000 .474675 .7505644

2008.5 | .7082024 .0886611 -2.76 0.006 .5541074 .9051505

2008.75 | .6425625 .0791036 -3.59 0.000 .5048088 .8179069

2009 | .6103537 .0780712 -3.86 0.000 .4750105 .7842598

2009.25 | .565684 .0776487 -4.15 0.000 .4322485 .7403111

2009.5 | .6472459 .0864484 -3.26 0.001 .4981726 .8409279

2009.75 | .4817742 .061932 -5.68 0.000 .374474 .6198197

2010 | .5253943 .0712295 -4.75 0.000 .4027959 .6853078

2010.25 | .5406553 .070558 -4.71 0.000 .4186342 .6982424

2010.5 | .588608 .0794128 -3.93 0.000 .4518405 .7667736

2010.75 | .538671 .0693082 -4.81 0.000 .4186043 .6931761

2011 | .5976668 .0807547 -3.81 0.000 .4586144 .7788802

2011.25 | .5494662 .0693829 -4.74 0.000 .4289997 .7037605

2011.5 | .6286321 .0854023 -3.42 0.001 .4816786 .8204191

2011.75 | .5176309 .071282 -4.78 0.000 .3951871 .6780124

2012 | .6257165 .0831435 -3.53 0.000 .48225 .8118634

2012.25 | .5517125 .067559 -4.86 0.000 .4339907 .7013669

2012.5 | .6126276 .0785431 -3.82 0.000 .4765042 .7876376

2012.75 | .5488086 .0739629 -4.45 0.000 .4214097 .7147224

2013 | .574665 .0833163 -3.82 0.000 .4325194 .7635262

2013.25 | .4761858 .0707837 -4.99 0.000 .3558341 .6372432

2013.5 | .6896789 .0972884 -2.63 0.008 .5230866 .9093273

2013.75 | .538489 .0757358 -4.40 0.000 .4087516 .7094048

2014 | .5265151 .0825133 -4.09 0.000 .3872701 .7158265

2014.25 | .5912465 .0859516 -3.61 0.000 .4446583 .7861597

2014.5 | .5942258 .0829985 -3.73 0.000 .4519183 .7813456

2014.75 | .5818392 .0854474 -3.69 0.000 .4363127 .7759043

2015 | .5510109 .0847956 -3.87 0.000 .407538 .7449933

2015.25 | .5642894 .0932587 -3.46 0.001 .4081558 .7801494

2015.5 | .6963843 .1113344 -2.26 0.024 .5090533 .9526531

2015.75 | .4825782 .082056 -4.29 0.000 .3458058 .6734466

2016 | .5984912 .0908143 -3.38 0.001 .4445263 .8057829

|

\_cons | .0000169 1.28e-06 -145.91 0.000 .0000146 .0000196

ln(hours) | 1 (exposure)

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

. estat gof

Deviance goodness-of-fit = 16365.59

Prob > chi2(19203) = 1.0000

Pearson goodness-of-fit = 247150.2

Prob > chi2(19203) = 0.0000

. glm MR `part\_count\_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 = -15506.93

Iteration 1: log pseudolikelihood = -15337.322

Iteration 2: log pseudolikelihood = -15336.986

Iteration 3: log pseudolikelihood = -15336.976

Iteration 4: log pseudolikelihood = -15336.976

Iteration 5: log pseudolikelihood = -15336.976

Generalized linear models No. of obs = 19,291

Optimization : ML Residual df = 19,204

Scale parameter = 1

Deviance = 10912.63521 (1/df) Deviance = .568248

Pearson = 223642.1991 (1/df) Pearson = 11.64561

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

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

AIC = 1.599085

Log pseudolikelihood = -15336.97579 BIC = -178580.8

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

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

| Robust

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

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

p47\_c\_lag\_all | 1.058087 .0350055 1.71 0.088 .991655 1.12897

p48\_c\_lag\_all | 1.00247 .0051085 0.48 0.628 .9925068 1.012532

p71\_c\_lag\_all | .9931591 .0207085 -0.33 0.742 .9533893 1.034588

p72\_c\_lag\_all | 1.009858 .012013 0.82 0.410 .9865852 1.033679

p75\_c\_lag\_all | 1.000108 .0000501 2.15 0.032 1.00001 1.000206

p77\_c\_lag\_all | .996584 .0019379 -1.76 0.078 .9927931 1.000389

mine\_time | .9967472 .0023199 -1.40 0.162 .9922107 1.001304

onsite\_insp\_hours | .9998256 .0001334 -1.31 0.191 .9995642 1.000087

|

state |

AL | 1.159626 .0988663 1.74 0.082 .981176 1.370531

CO | .8216493 .1676073 -0.96 0.336 .5508721 1.225525

IL | 1.177204 .0934982 2.05 0.040 1.007502 1.37549

IN | 1.020316 .1659373 0.12 0.902 .7418241 1.403357

MD | 1.202374 .2438105 0.91 0.363 .8080492 1.789128

MT | .0001571 .0001579 -8.71 0.000 .0000219 .0011267

NM | .8281544 .0477656 -3.27 0.001 .7396332 .9272701

OH | 1.118728 .1590556 0.79 0.430 .846651 1.478238

OK | .957362 .2581541 -0.16 0.872 .5643498 1.624067

PA | .9860826 .097044 -0.14 0.887 .813099 1.195868

TN | 1.189812 .1788337 1.16 0.248 .8862157 1.597414

UT | .6597997 .0656251 -4.18 0.000 .5429374 .8018156

VA | .7320453 .0654442 -3.49 0.000 .6143859 .8722373

WV | 1.113641 .0643523 1.86 0.063 .9943928 1.247189

WY | 1.252127 .0932209 3.02 0.003 1.082122 1.44884

|

time |

2000.25 | 1.05457 .1085062 0.52 0.606 .8619735 1.290199

2000.5 | 1.322782 .1396568 2.65 0.008 1.075524 1.626884

2000.75 | .9589147 .1088806 -0.37 0.712 .7675907 1.197927

2001 | .9904198 .1083703 -0.09 0.930 .799249 1.227316

2001.25 | .9364433 .1110718 -0.55 0.580 .7421988 1.181525

2001.5 | 1.04918 .1132737 0.44 0.657 .8490841 1.29643

2001.75 | .9558536 .1064998 -0.41 0.685 .7683371 1.189134

2002 | .9675703 .108036 -0.30 0.768 .7773917 1.204274

2002.25 | .8747172 .1082224 -1.08 0.279 .6863642 1.114758

2002.5 | 1.058568 .1212698 0.50 0.619 .8456779 1.325051

2002.75 | .9556295 .1079983 -0.40 0.688 .7657605 1.192576

2003 | .8701774 .1050789 -1.15 0.249 .6867843 1.102542

2003.25 | .9711003 .1208866 -0.24 0.814 .760857 1.239439

2003.5 | 1.01014 .1233312 0.08 0.934 .7951624 1.283239

2003.75 | .7293776 .0878721 -2.62 0.009 .5759748 .923637

2004 | .9230085 .112468 -0.66 0.511 .7269212 1.17199

2004.25 | .8261666 .0947546 -1.66 0.096 .6598448 1.034412

2004.5 | .8706263 .1090505 -1.11 0.269 .6811054 1.112882

2004.75 | .7699382 .096502 -2.09 0.037 .6022384 .9843357

2005 | .7107931 .0889956 -2.73 0.006 .5561188 .9084871

2005.25 | .8461404 .1037784 -1.36 0.173 .6653395 1.076073

2005.5 | .8012558 .0968743 -1.83 0.067 .6322055 1.01551

2005.75 | .6319033 .0808175 -3.59 0.000 .4917971 .8119239

2006 | .7646183 .0955066 -2.15 0.032 .5985814 .9767113

2006.25 | .7343878 .0924755 -2.45 0.014 .5737736 .9399623

2006.5 | .8459659 .1052051 -1.35 0.179 .6629742 1.079466

2006.75 | .6480305 .0825744 -3.40 0.001 .504815 .8318762

2007 | .7044488 .0890267 -2.77 0.006 .5498908 .9024486

2007.25 | .6273503 .0864205 -3.38 0.001 .478909 .8218019

2007.5 | .729496 .0917205 -2.51 0.012 .5701646 .9333523

2007.75 | .7294431 .0920509 -2.50 0.012 .5696071 .9341303

2008 | .5765133 .0732987 -4.33 0.000 .4493516 .7396604

2008.25 | .6006003 .0767235 -3.99 0.000 .4675727 .7714753

2008.5 | .7202921 .09556 -2.47 0.013 .5553683 .934192

2008.75 | .6503614 .0849016 -3.30 0.001 .5035405 .8399918

2009 | .5861772 .078797 -3.97 0.000 .4504079 .7628722

2009.25 | .586221 .0800162 -3.91 0.000 .448618 .7660304

2009.5 | .6235184 .0885193 -3.33 0.001 .4720701 .8235541

2009.75 | .4721663 .0629334 -5.63 0.000 .3636146 .6131246

2010 | .4911664 .0660499 -5.29 0.000 .377366 .6392849

2010.25 | .5360431 .0708139 -4.72 0.000 .4137632 .6944604

2010.5 | .648139 .0936052 -3.00 0.003 .4883558 .860201

2010.75 | .5525847 .0748483 -4.38 0.000 .4237429 .7206016

2011 | .6460957 .0852384 -3.31 0.001 .4988834 .8367478

2011.25 | .5433241 .0704336 -4.71 0.000 .4214186 .7004935

2011.5 | .6449047 .0865833 -3.27 0.001 .4956958 .8390267

2011.75 | .5024761 .0715314 -4.83 0.000 .3801371 .6641874

2012 | .597055 .0814238 -3.78 0.000 .4570157 .7800052

2012.25 | .5231017 .0694502 -4.88 0.000 .403251 .6785734

2012.5 | .6502729 .0876461 -3.19 0.001 .499307 .8468835

2012.75 | .532464 .0773275 -4.34 0.000 .4005658 .7077936

2013 | .5212799 .0751521 -4.52 0.000 .3929656 .6914924

2013.25 | .4309902 .0654583 -5.54 0.000 .320028 .580426

2013.5 | .608608 .0858827 -3.52 0.000 .4615532 .8025158

2013.75 | .5139814 .0754423 -4.53 0.000 .3854854 .6853097

2014 | .4849241 .0774169 -4.53 0.000 .354635 .66308

2014.25 | .5595823 .0810063 -4.01 0.000 .4213493 .7431656

2014.5 | .5643598 .0824119 -3.92 0.000 .4238942 .7513714

2014.75 | .5601532 .0852209 -3.81 0.000 .4157251 .7547573

2015 | .5360798 .0825624 -4.05 0.000 .396401 .7249769

2015.25 | .5373118 .0894432 -3.73 0.000 .3877321 .7445964

2015.5 | .6547069 .0985602 -2.81 0.005 .4874233 .8794022

2015.75 | .4727245 .0804639 -4.40 0.000 .3386276 .6599239

2016 | .5934546 .0948352 -3.27 0.001 .4338742 .8117292

|

\_cons | .0000162 1.36e-06 -132.04 0.000 .0000138 .0000191

ln(hours) | 1 (exposure)

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

. nbreg MR `part\_count\_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 = -15422.636

Iteration 1: log pseudolikelihood = -15043.847

Iteration 2: log pseudolikelihood = -15037.224

Iteration 3: log pseudolikelihood = -15037.219

Iteration 4: log pseudolikelihood = -15037.219

Iteration 5: log pseudolikelihood = -15037.219

Iteration 6: log pseudolikelihood = -15037.219

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 = -14961.762

Iteration 1: log pseudolikelihood = -14934.269

Iteration 2: log pseudolikelihood = -14933.256

Iteration 3: log pseudolikelihood = -14933.253

Iteration 4: log pseudolikelihood = -14933.253

Negative binomial regression Number of obs = 19,291

Wald chi2(86) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -14933.253 Pseudo R2 = 0.0253

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

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

| Robust

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

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

p47\_c\_lag\_all | 1.05543 .0386305 1.47 0.140 .9823678 1.133926

p48\_c\_lag\_all | 1.002962 .0047465 0.63 0.532 .9937026 1.012309

p71\_c\_lag\_all | .9785886 .018808 -1.13 0.260 .9424113 1.016155

p72\_c\_lag\_all | 1.010858 .0121963 0.90 0.371 .9872346 1.035048

p75\_c\_lag\_all | 1.000113 .0000477 2.36 0.018 1.000019 1.000206

p77\_c\_lag\_all | .9966639 .0018334 -1.82 0.069 .993077 1.000264

mine\_time | .9964072 .0023409 -1.53 0.126 .9918296 1.001006

onsite\_insp\_hours | .9998207 .0001296 -1.38 0.166 .9995668 1.000075

|

state |

AL | 1.108901 .0859115 1.33 0.182 .9526785 1.290741

CO | .779714 .1599461 -1.21 0.225 .5215846 1.16559

IL | 1.152037 .0961036 1.70 0.090 .97827 1.35667

IN | .9720826 .1563576 -0.18 0.860 .7092332 1.332347

MD | 1.169238 .226969 0.81 0.421 .7992271 1.71055

MT | 2.16e-06 2.17e-06 -12.99 0.000 3.02e-07 .0000155

NM | .8125809 .0459621 -3.67 0.000 .7273108 .907848

OH | 1.197457 .1640358 1.32 0.188 .9154963 1.566258

OK | .9239349 .2524782 -0.29 0.772 .5408023 1.578498

PA | .9210696 .0975973 -0.78 0.438 .7483391 1.13367

TN | 1.14201 .1688146 0.90 0.369 .8547587 1.525797

UT | .6476182 .0618696 -4.55 0.000 .5370322 .7809761

VA | .6869354 .0729458 -3.54 0.000 .5578619 .8458729

WV | 1.02966 .0644666 0.47 0.641 .910753 1.164092

WY | 1.207685 .0893222 2.55 0.011 1.044714 1.396078

|

time |

2000.25 | 1.08224 .1036285 0.83 0.409 .8970523 1.305657

2000.5 | 1.294321 .1252857 2.67 0.008 1.070653 1.564716

2000.75 | .9656097 .1011592 -0.33 0.738 .786372 1.185701

2001 | .9906175 .0994972 -0.09 0.925 .8136013 1.206147

2001.25 | .8982823 .0982678 -0.98 0.327 .7249289 1.11309

2001.5 | 1.06414 .1074468 0.62 0.538 .8730766 1.297015

2001.75 | .9197396 .094075 -0.82 0.413 .7526624 1.123905

2002 | .9789176 .1006024 -0.21 0.836 .8003298 1.197356

2002.25 | .88309 .1048879 -1.05 0.295 .6996883 1.114565

2002.5 | 1.052509 .1082658 0.50 0.619 .8603346 1.287609

2002.75 | .9452061 .1019754 -0.52 0.601 .7650555 1.167777

2003 | .8329688 .0949479 -1.60 0.109 .6661967 1.04149

2003.25 | .9486709 .1046082 -0.48 0.633 .7642846 1.177541

2003.5 | .9971694 .114542 -0.02 0.980 .7961482 1.248947

2003.75 | .7540402 .0831743 -2.56 0.010 .6074392 .9360222

2004 | .9204459 .1020971 -0.75 0.455 .7405968 1.14397

2004.25 | .8645105 .0935383 -1.35 0.178 .6993136 1.068731

2004.5 | .8768917 .1014946 -1.14 0.256 .6989158 1.100189

2004.75 | .7872749 .0959539 -1.96 0.050 .6199849 .9997047

2005 | .7047106 .0802104 -3.07 0.002 .5638023 .8808355

2005.25 | .8553486 .0979029 -1.37 0.172 .6834628 1.070462

2005.5 | .8288775 .0930813 -1.67 0.095 .6651233 1.032948

2005.75 | .6477151 .0758643 -3.71 0.000 .5148564 .8148578

2006 | .7445358 .0883725 -2.49 0.013 .5900006 .9395475

2006.25 | .7251517 .0881461 -2.64 0.008 .5714269 .9202313

2006.5 | .8376612 .0986245 -1.50 0.132 .6650429 1.055084

2006.75 | .6537854 .0806152 -3.45 0.001 .5134256 .8325167

2007 | .7204514 .0861383 -2.74 0.006 .5699459 .9107008

2007.25 | .6399129 .0855938 -3.34 0.001 .4923403 .8317185

2007.5 | .7205121 .082048 -2.88 0.004 .5763829 .900682

2007.75 | .736205 .0900471 -2.50 0.012 .5792769 .9356456

2008 | .5904154 .0754104 -4.13 0.000 .4596619 .7583624

2008.25 | .59763 .0705378 -4.36 0.000 .4742045 .7531805

2008.5 | .7193528 .0910701 -2.60 0.009 .5612802 .9219431

2008.75 | .6463952 .0807245 -3.49 0.000 .5060537 .825657

2009 | .6048727 .0782747 -3.88 0.000 .469367 .7794987

2009.25 | .5801562 .0765933 -4.12 0.000 .4478862 .7514882

2009.5 | .644556 .0861245 -3.29 0.001 .496049 .837523

2009.75 | .4824025 .061736 -5.70 0.000 .3753843 .6199305

2010 | .5171311 .068389 -4.99 0.000 .3990543 .6701459

2010.25 | .5441603 .0705321 -4.69 0.000 .4220823 .7015467

2010.5 | .6097757 .0826354 -3.65 0.000 .4675384 .7952854

2010.75 | .5443339 .0696066 -4.76 0.000 .4236607 .6993792

2011 | .6234699 .0823604 -3.58 0.000 .4812511 .8077172

2011.25 | .5486141 .0690188 -4.77 0.000 .428727 .7020257

2011.5 | .6397083 .0851197 -3.36 0.001 .492857 .8303153

2011.75 | .5105645 .0692874 -4.95 0.000 .3913238 .6661393

2012 | .6204781 .0817178 -3.62 0.000 .4793162 .8032132

2012.25 | .5407623 .06734 -4.94 0.000 .4236507 .6902474

2012.5 | .6287997 .0808589 -3.61 0.000 .4887134 .8090407

2012.75 | .5464206 .0749442 -4.41 0.000 .4176194 .7149464

2013 | .560938 .0791957 -4.09 0.000 .4253423 .7397606

2013.25 | .4634052 .0682555 -5.22 0.000 .3472054 .6184937

2013.5 | .6635594 .0926818 -2.94 0.003 .5046489 .8725096

2013.75 | .5316988 .0750841 -4.47 0.000 .4031465 .701243

2014 | .5167836 .0808322 -4.22 0.000 .3803373 .7021802

2014.25 | .5799757 .0812096 -3.89 0.000 .4407806 .7631274

2014.5 | .5872215 .0817018 -3.83 0.000 .4470662 .7713156

2014.75 | .576983 .0847529 -3.74 0.000 .4326435 .7694772

2015 | .5455244 .0826495 -4.00 0.000 .4053715 .7341338

2015.25 | .5530588 .0885065 -3.70 0.000 .4041595 .7568153

2015.5 | .6822364 .104154 -2.50 0.012 .5058081 .9202038

2015.75 | .4808454 .0807473 -4.36 0.000 .3459912 .6682607

2016 | .6060128 .093381 -3.25 0.001 .4480427 .8196796

|

\_cons | .0000167 1.30e-06 -141.36 0.000 .0000143 .0000194

ln(hours) | 1 (exposure)

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

/lnalpha | -1.619378 .1373876 -1.888653 -1.350103

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

alpha | .1980218 .0272057 .1512754 .2592135

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

. lrtest pois nbin, stats force

Likelihood-ratio test LR chi2(0) = -207.93

(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 -14933.25 88 30042.51 30734.84

pois | 19,291 -15581.44 -15037.22 88 30250.44 30942.77

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

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

. summ MR pcv4\_yhat

Variable | Obs Mean Std. Dev. Min Max

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

MR | 30,289 .4096207 .9550592 0 14

pcv4\_yhat | 19,291 .5442257 .7718749 6.71e-08 6.539633