. glm MR `part\_count\_lag\_1\_vars' `covariates' ib(freq).state ib(freq).time, family(poisson) link(log) vce(cl mineid) exposure(hours) iter(50) eform

Iteration 0: log pseudolikelihood = -20067.475

Iteration 1: log pseudolikelihood = -18746.001

Iteration 2: log pseudolikelihood = -18733.272

Iteration 3: log pseudolikelihood = -18733.264

Iteration 4: log pseudolikelihood = -18733.264

Generalized linear models No. of obs = 26,110

Optimization : ML Residual df = 26,025

Scale parameter = 1

Deviance = 21114.13949 (1/df) Deviance = .8113022

Pearson = 348054.7873 (1/df) Pearson = 13.37386

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

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

AIC = 1.44146

Log pseudolikelihood = -18733.26372 BIC = -243562

(Std. Err. adjusted for 1,475 clusters in mineid)

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

| Robust

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

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

p47\_1lag | 1.054855 .1093753 0.52 0.607 .860863 1.292563

p48\_1lag | .9919954 .018228 -0.44 0.662 .956905 1.028373

p71\_1lag | 1.096724 .0740306 1.37 0.171 .9608149 1.251857

p72\_1lag | .9992241 .0412142 -0.02 0.985 .9216246 1.083357

p75\_1lag | 1.002106 .0007941 2.66 0.008 1.000551 1.003664

p77\_1lag | .9875859 .0097458 -1.27 0.206 .968668 1.006873

mine\_time | .9982724 .0020846 -0.83 0.408 .9941951 1.002366

onsite\_insp\_hours | .9996445 .0001483 -2.40 0.017 .999354 .9999352

|

state |

AL | 1.06358 .0837866 0.78 0.434 .9114107 1.241155

AR | 2.051788 .1218336 12.10 0.000 1.82637 2.305028

CO | .6837607 .1113775 -2.33 0.020 .4968808 .9409273

IL | 1.180139 .106548 1.83 0.067 .9887422 1.408586

IN | .8965074 .1411683 -0.69 0.488 .6584453 1.220641

MD | .9831296 .1617702 -0.10 0.918 .7121128 1.35729

MT | .8288609 .0431379 -3.61 0.000 .7484814 .9178723

NM | .7674114 .0372182 -5.46 0.000 .6978247 .8439372

OH | 1.113671 .1411727 0.85 0.396 .8686715 1.427769

OK | .86809 .2379724 -0.52 0.606 .50725 1.485619

PA | .8982227 .0916811 -1.05 0.293 .735364 1.097149

TN | 1.186148 .1636527 1.24 0.216 .9051045 1.554458

UT | .5967472 .0747458 -4.12 0.000 .4668451 .7627951

VA | .6677488 .0610881 -4.41 0.000 .5581387 .7988846

WV | .9589826 .0558912 -0.72 0.472 .8554629 1.075029

WY | 1.029154 .0473121 0.63 0.532 .9404788 1.12619

|

time |

2000.25 | .9911882 .1187226 -0.07 0.941 .7837921 1.253463

2000.5 | 1.147855 .1168581 1.35 0.176 .9402213 1.401342

2000.75 | .8673385 .0892179 -1.38 0.166 .7089746 1.061076

2001 | .8720307 .0875303 -1.36 0.173 .7162954 1.061625

2001.25 | .7783943 .0801212 -2.43 0.015 .6361863 .9523904

2001.75 | .8198529 .0733183 -2.22 0.026 .6880408 .9769169

2002 | .8807392 .0817001 -1.37 0.171 .7343232 1.056349

2002.25 | .7922611 .0843783 -2.19 0.029 .6430026 .9761666

2002.5 | .985346 .097212 -0.15 0.881 .812103 1.195546

2002.75 | .8808829 .09651 -1.16 0.247 .710657 1.091883

2003 | .7138534 .0789862 -3.05 0.002 .5746793 .8867321

2003.25 | .8233055 .0875193 -1.83 0.067 .6684613 1.014018

2003.5 | .8997067 .0961763 -0.99 0.323 .729642 1.10941

2003.75 | .6706046 .0681651 -3.93 0.000 .5494703 .8184437

2004 | .8410859 .0990904 -1.47 0.142 .6676643 1.059553

2004.25 | .7985008 .0847146 -2.12 0.034 .6485891 .9830623

2004.5 | .8003963 .0839361 -2.12 0.034 .6516901 .9830351

2004.75 | .7180495 .0857219 -2.77 0.006 .5682463 .9073444

2005 | .6194742 .0635754 -4.67 0.000 .5066011 .7574958

2005.25 | .7966799 .0827273 -2.19 0.029 .6499726 .976501

2005.5 | .7257345 .0763633 -3.05 0.002 .59049 .8919552

2005.75 | .6492787 .0730234 -3.84 0.000 .5208322 .8094024

2006 | .6681839 .074731 -3.61 0.000 .5366559 .8319479

2006.25 | .6646663 .0781003 -3.48 0.001 .5279405 .8368013

2006.5 | .7344696 .0872868 -2.60 0.009 .5818542 .9271147

2006.75 | .5967412 .075721 -4.07 0.000 .4653464 .7652366

2007 | .6304283 .0698783 -4.16 0.000 .5073251 .7834026

2007.25 | .6109144 .0743461 -4.05 0.000 .4812737 .7754764

2007.5 | .6494967 .0719942 -3.89 0.000 .5226664 .8071036

2007.75 | .6581461 .0744182 -3.70 0.000 .5273208 .8214284

2008 | .5460824 .0682089 -4.84 0.000 .4275019 .6975546

2008.25 | .5626088 .0630419 -5.13 0.000 .4516759 .700787

2008.5 | .654457 .0765046 -3.63 0.000 .5204482 .8229713

2008.75 | .5315856 .0620373 -5.41 0.000 .4228983 .668206

2009 | .5350361 .0643978 -5.20 0.000 .4226016 .6773842

2009.25 | .4868482 .062013 -5.65 0.000 .3792892 .6249088

2009.5 | .6070063 .0771984 -3.93 0.000 .4730841 .7788398

2009.75 | .4450031 .0520604 -6.92 0.000 .3538196 .5596856

2010 | .4879735 .0665636 -5.26 0.000 .3734955 .6375395

2010.25 | .4982369 .0639604 -5.43 0.000 .3874041 .6407781

2010.5 | .5781623 .0726382 -4.36 0.000 .4519683 .7395909

2010.75 | .4651334 .0609677 -5.84 0.000 .359754 .6013807

2011 | .5337442 .0665006 -5.04 0.000 .4180995 .6813757

2011.25 | .5245682 .0648855 -5.22 0.000 .4116368 .668482

2011.5 | .5890678 .0715504 -4.36 0.000 .4642747 .7474041

2011.75 | .4925693 .0641814 -5.43 0.000 .3815544 .6358844

2012 | .604798 .0729699 -4.17 0.000 .4774319 .7661421

2012.25 | .5250467 .0591629 -5.72 0.000 .4210013 .6548055

2012.5 | .5757338 .0685265 -4.64 0.000 .45594 .7270021

2012.75 | .4923456 .0602694 -5.79 0.000 .3873221 .6258467

2013 | .5257736 .0684546 -4.94 0.000 .4073561 .6786149

2013.25 | .4528247 .0658441 -5.45 0.000 .3405328 .6021452

2013.5 | .6025767 .0810105 -3.77 0.000 .4629954 .7842383

2013.75 | .4729795 .0656269 -5.40 0.000 .3603598 .6207951

2014 | .4647915 .0676933 -5.26 0.000 .3493713 .6183426

2014.25 | .5125934 .0753371 -4.55 0.000 .3842995 .6837167

2014.5 | .5278522 .0701637 -4.81 0.000 .406788 .6849463

2014.75 | .5277586 .0712028 -4.74 0.000 .4051306 .6875045

2015 | .4847423 .070311 -4.99 0.000 .3647924 .6441339

2015.25 | .5145767 .0816571 -4.19 0.000 .377029 .7023046

2015.5 | .6617436 .0972777 -2.81 0.005 .496091 .8827103

2015.75 | .4013985 .0645712 -5.67 0.000 .292851 .5501801

2016 | .5436207 .077435 -4.28 0.000 .4111953 .7186937

|

\_cons | .0000187 1.54e-06 -132.15 0.000 .0000159 .000022

ln(hours) | 1 (exposure)

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

. estat gof

Deviance goodness-of-fit = 21114.14

Prob > chi2(26025) = 1.0000

Pearson goodness-of-fit = 348054.8

Prob > chi2(26025) = 0.0000

. glm MR `part\_count\_lag\_1\_vars' `covariates' ib(freq).state ib(freq).time, family(nbinomial) link(log) vce(cl mineid) exposure(hours) iter(50) eform

Iteration 0: log pseudolikelihood = -19176.917

Iteration 1: log pseudolikelihood = -18978.26

Iteration 2: log pseudolikelihood = -18977.963

Iteration 3: log pseudolikelihood = -18977.963

Generalized linear models No. of obs = 26,110

Optimization : ML Residual df = 26,025

Scale parameter = 1

Deviance = 14468.27506 (1/df) Deviance = .5559376

Pearson = 322767.7472 (1/df) Pearson = 12.40222

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

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

AIC = 1.460204

Log pseudolikelihood = -18977.96262 BIC = -250207.9

(Std. Err. adjusted for 1,475 clusters in mineid)

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| Robust

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

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

p47\_1lag | 1.080911 .120727 0.70 0.486 .8683985 1.345428

p48\_1lag | .9892848 .0176132 -0.61 0.545 .9553589 1.024416

p71\_1lag | 1.139722 .0733311 2.03 0.042 1.004689 1.292904

p72\_1lag | .9858077 .0457363 -0.31 0.758 .900121 1.079651

p75\_1lag | 1.002721 .0008103 3.36 0.001 1.001134 1.00431

p77\_1lag | .989202 .0113676 -0.94 0.345 .9671709 1.011735

mine\_time | .9984208 .0017271 -0.91 0.361 .9950416 1.001812

onsite\_insp\_hours | .9996375 .0001457 -2.49 0.013 .9993519 .9999231

|

state |

AL | 1.135275 .1029073 1.40 0.162 .9504811 1.355996

AR | 2.023534 .1083259 13.17 0.000 1.821978 2.247387

CO | .7352278 .1228342 -1.84 0.066 .5299221 1.020074

IL | 1.198975 .090206 2.41 0.016 1.034592 1.389476

IN | .9368949 .1494705 -0.41 0.683 .6853174 1.280826

MD | 1.040834 .1748889 0.24 0.812 .7487832 1.446795

MT | .9507943 .0425399 -1.13 0.259 .8709689 1.037936

NM | .8167685 .0363485 -4.55 0.000 .7485454 .8912096

OH | .9965785 .1476588 -0.02 0.982 .7454055 1.332387

OK | .9126508 .2416514 -0.35 0.730 .5431549 1.533506

PA | 1.021571 .090768 0.24 0.810 .8582979 1.215903

TN | 1.284757 .1790398 1.80 0.072 .9776876 1.68827

UT | .6377304 .0855611 -3.35 0.001 .4902704 .8295424

VA | .7217533 .0526754 -4.47 0.000 .6255556 .8327442

WV | 1.081841 .0542856 1.57 0.117 .9805077 1.193646

WY | 1.102476 .0469823 2.29 0.022 1.014133 1.198514

|

time |

2000.25 | .9835345 .1092744 -0.15 0.881 .7910754 1.222817

2000.5 | 1.220472 .1299133 1.87 0.061 .9906527 1.503606

2000.75 | .8823196 .1003532 -1.10 0.271 .706012 1.102655

2001 | .8823207 .0920478 -1.20 0.230 .7191594 1.0825

2001.25 | .8492386 .0957008 -1.45 0.147 .6809382 1.059136

2001.75 | .8788303 .091963 -1.23 0.217 .7158684 1.078889

2002 | .8779978 .0897719 -1.27 0.203 .7185571 1.072817

2002.25 | .7953645 .0880117 -2.07 0.039 .6402887 .9879991

2002.5 | 1.015971 .1073768 0.15 0.881 .8258834 1.24981

2002.75 | .9467034 .1051131 -0.49 0.622 .7615606 1.176856

2003 | .7626251 .0872244 -2.37 0.018 .609475 .9542592

2003.25 | .8589997 .1034059 -1.26 0.207 .6784625 1.087577

2003.5 | .9426859 .1053637 -0.53 0.597 .7572313 1.173561

2003.75 | .6435315 .072727 -3.90 0.000 .5156719 .8030936

2004 | .885358 .1055351 -1.02 0.307 .7008988 1.118362

2004.25 | .7907102 .0853547 -2.18 0.030 .6399304 .9770165

2004.5 | .8157098 .0919152 -1.81 0.071 .6540655 1.017302

2004.75 | .7211154 .0856118 -2.75 0.006 .5714115 .9100402

2005 | .643041 .0723473 -3.92 0.000 .5157885 .8016886

2005.25 | .8181505 .0865329 -1.90 0.058 .6649739 1.006611

2005.5 | .6885241 .077178 -3.33 0.001 .5527216 .8576931

2005.75 | .6718094 .0797563 -3.35 0.001 .5323443 .8478119

2006 | .7167399 .0810649 -2.94 0.003 .5742337 .8946114

2006.25 | .7191167 .090266 -2.63 0.009 .5622813 .9196976

2006.5 | .7589584 .0888734 -2.36 0.019 .6033135 .9547572

2006.75 | .6219744 .0747039 -3.95 0.000 .4915149 .7870609

2007 | .6263895 .0730147 -4.01 0.000 .4984536 .7871622

2007.25 | .6233012 .0783985 -3.76 0.000 .4871181 .7975569

2007.5 | .6769694 .0772028 -3.42 0.001 .5413729 .8465284

2007.75 | .6697982 .0780028 -3.44 0.001 .5331083 .8415357

2008 | .546012 .0650296 -5.08 0.000 .4323393 .689572

2008.25 | .584117 .0687473 -4.57 0.000 .4637866 .7356674

2008.5 | .6570253 .0757519 -3.64 0.000 .5241343 .82361

2008.75 | .5221104 .0621143 -5.46 0.000 .4135203 .6592161

2009 | .5159467 .0623378 -5.48 0.000 .4071559 .653806

2009.25 | .4781245 .0584194 -6.04 0.000 .3763027 .6074978

2009.5 | .5949558 .0762616 -4.05 0.000 .4627831 .7648775

2009.75 | .4413599 .0543733 -6.64 0.000 .3466803 .5618969

2010 | .4774565 .0616622 -5.72 0.000 .3706836 .6149846

2010.25 | .4994097 .063765 -5.44 0.000 .3888436 .6414149

2010.5 | .6233841 .0783878 -3.76 0.000 .4872152 .79761

2010.75 | .4726873 .0611758 -5.79 0.000 .366784 .6091687

2011 | .5707194 .06946 -4.61 0.000 .4495998 .7244677

2011.25 | .5339646 .0644276 -5.20 0.000 .4215096 .6764217

2011.5 | .6042852 .0696288 -4.37 0.000 .4821278 .7573938

2011.75 | .4856314 .0613367 -5.72 0.000 .3791382 .6220367

2012 | .5975574 .0716563 -4.29 0.000 .4723975 .755878

2012.25 | .5217527 .0607885 -5.58 0.000 .4152338 .6555967

2012.5 | .6086459 .0753964 -4.01 0.000 .4774431 .7759038

2012.75 | .4770026 .0612311 -5.77 0.000 .3708985 .6134603

2013 | .4897947 .0612731 -5.71 0.000 .3832915 .6258915

2013.25 | .4213048 .0585057 -6.22 0.000 .3209163 .5530966

2013.5 | .5460754 .0709947 -4.65 0.000 .4232421 .7045574

2013.75 | .4621376 .0617145 -5.78 0.000 .3557138 .6004016

2014 | .4196123 .0593695 -6.14 0.000 .3179908 .5537093

2014.25 | .4749734 .0643932 -5.49 0.000 .3641414 .6195388

2014.5 | .4913179 .0635505 -5.49 0.000 .3812959 .6330865

2014.75 | .4973588 .0652471 -5.32 0.000 .3845944 .6431859

2015 | .4624875 .0652164 -5.47 0.000 .3508085 .6097193

2015.25 | .4995327 .0759352 -4.57 0.000 .3708265 .6729103

2015.5 | .6425017 .0874705 -3.25 0.001 .4920297 .838991

2015.75 | .3817593 .0593957 -6.19 0.000 .2814208 .5178729

2016 | .5247568 .0763008 -4.43 0.000 .3946313 .6977897

|

\_cons | .0000175 1.43e-06 -133.93 0.000 .0000149 .0000206

ln(hours) | 1 (exposure)

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

. nbreg MR `part\_count\_lag\_1\_vars' `covariates' ib(freq).state ib(freq).time, vce(cl mineid) exposure(hours) iter(50) irr

Fitting Poisson model:

Iteration 0: log pseudolikelihood = -19605.342

Iteration 1: log pseudolikelihood = -18745.514

Iteration 2: log pseudolikelihood = -18733.278

Iteration 3: log pseudolikelihood = -18733.264

Iteration 4: log pseudolikelihood = -18733.264

Fitting constant-only model:

Iteration 0: log pseudolikelihood = -19311.72

Iteration 1: log pseudolikelihood = -19057.693

Iteration 2: log pseudolikelihood = -19051.142

Iteration 3: log pseudolikelihood = -19051.138

Iteration 4: log pseudolikelihood = -19051.138

Fitting full model:

Iteration 0: log pseudolikelihood = -18617.086

Iteration 1: log pseudolikelihood = -18590.008

Iteration 2: log pseudolikelihood = -18589.242

Iteration 3: log pseudolikelihood = -18589.242

Negative binomial regression Number of obs = 26,110

Wald chi2(84) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -18589.242 Pseudo R2 = 0.0242

(Std. Err. adjusted for 1,475 clusters in mineid)

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

| Robust

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

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

p47\_1lag | 1.067887 .1174983 0.60 0.551 .8607337 1.324897

p48\_1lag | .9899784 .0177392 -0.56 0.574 .9558137 1.025364

p71\_1lag | 1.115972 .0713871 1.72 0.086 .984472 1.265038

p72\_1lag | .9902677 .0426695 -0.23 0.820 .9100712 1.077531

p75\_1lag | 1.002345 .0008003 2.93 0.003 1.000777 1.003914

p77\_1lag | .9876103 .0106728 -1.15 0.249 .966912 1.008752

mine\_time | .9983114 .0018938 -0.89 0.373 .9946065 1.00203

onsite\_insp\_hours | .9996355 .0001471 -2.48 0.013 .9993472 .9999239

|

state |

AL | 1.09668 .0924713 1.09 0.274 .929624 1.293757

AR | 2.057238 .1151061 12.89 0.000 1.843565 2.295677

CO | .7044241 .1163605 -2.12 0.034 .5095986 .9737338

IL | 1.17817 .0954021 2.02 0.043 1.005269 1.38081

IN | .9165278 .1445625 -0.55 0.581 .6728015 1.248545

MD | 1.006958 .1675329 0.04 0.967 .7267626 1.39518

MT | .8736034 .0431932 -2.73 0.006 .7929188 .9624982

NM | .7888698 .0366766 -5.10 0.000 .7201629 .8641317

OH | 1.067573 .1437212 0.49 0.627 .819984 1.389921

OK | .8878665 .238284 -0.44 0.658 .5246912 1.502421

PA | .949512 .0920285 -0.53 0.593 .7852364 1.148155

TN | 1.221308 .1676955 1.46 0.145 .9331432 1.598461

UT | .612404 .0779481 -3.85 0.000 .4771943 .7859243

VA | .6910242 .0576785 -4.43 0.000 .5867391 .8138447

WV | 1.012637 .0553301 0.23 0.818 .9097974 1.127102

WY | 1.0595 .046831 1.31 0.191 .9715761 1.15538

|

time |

2000.25 | 1.001295 .1096475 0.01 0.991 .8078872 1.241005

2000.5 | 1.193182 .1202058 1.75 0.080 .9793843 1.45365

2000.75 | .884535 .0931757 -1.16 0.244 .7195329 1.087375

2001 | .8872983 .0863541 -1.23 0.219 .7332103 1.073769

2001.25 | .8150326 .0841847 -1.98 0.048 .665663 .9979195

2001.75 | .8471735 .0790909 -1.78 0.076 .7055137 1.017277

2002 | .892197 .0833336 -1.22 0.222 .7429442 1.071434

2002.25 | .8044514 .0855561 -2.05 0.041 .653088 .9908957

2002.5 | 1.005816 .098393 0.06 0.953 .8303296 1.218391

2002.75 | .9230506 .0964465 -0.77 0.443 .7521185 1.13283

2003 | .7415624 .080141 -2.77 0.006 .6000093 .9165106

2003.25 | .8382383 .0906365 -1.63 0.103 .6781556 1.036109

2003.5 | .9238095 .0971622 -0.75 0.451 .7517213 1.135293

2003.75 | .6652725 .0689479 -3.93 0.000 .5429781 .8151111

2004 | .8683384 .0976196 -1.26 0.209 .69662 1.082386

2004.25 | .8091966 .0825544 -2.08 0.038 .6625434 .9883113

2004.5 | .8168704 .0865181 -1.91 0.056 .6637414 1.005327

2004.75 | .7286676 .0846282 -2.73 0.006 .5803233 .9149322

2005 | .639795 .0653842 -4.37 0.000 .523663 .7816814

2005.25 | .8141426 .0824649 -2.03 0.042 .6675471 .9929309

2005.5 | .7156847 .0758049 -3.16 0.002 .5815178 .8808063

2005.75 | .6674811 .0740538 -3.64 0.000 .5370346 .8296132

2006 | .6990003 .0759896 -3.29 0.001 .5648611 .864994

2006.25 | .6958144 .0820376 -3.08 0.002 .5522496 .8767008

2006.5 | .7578167 .0860733 -2.44 0.015 .6065745 .9467694

2006.75 | .6153284 .0733992 -4.07 0.000 .4870479 .7773958

2007 | .6381739 .0706238 -4.06 0.000 .5137365 .7927524

2007.25 | .6239895 .0761839 -3.86 0.000 .4911936 .7926873

2007.5 | .6670784 .0723056 -3.74 0.000 .5394037 .8249733

2007.75 | .674097 .0752915 -3.53 0.000 .5415638 .8390641

2008 | .5565082 .0658622 -4.95 0.000 .4412988 .7017952

2008.25 | .5745386 .0639609 -4.98 0.000 .4619113 .7146276

2008.5 | .667242 .0744535 -3.63 0.000 .5361705 .8303551

2008.75 | .5321059 .061067 -5.50 0.000 .4249228 .6663249

2009 | .5333944 .0624365 -5.37 0.000 .4240442 .6709433

2009.25 | .4924968 .0588716 -5.93 0.000 .3896309 .6225203

2009.5 | .612054 .0751497 -4.00 0.000 .481146 .778579

2009.75 | .4502775 .0522119 -6.88 0.000 .3587396 .5651727

2010 | .4902292 .0624922 -5.59 0.000 .3818492 .6293705

2010.25 | .5068305 .0628532 -5.48 0.000 .397469 .6462823

2010.5 | .6028597 .0725871 -4.20 0.000 .4761323 .7633168

2010.75 | .4724483 .0593155 -5.97 0.000 .3693912 .6042575

2011 | .5572884 .0662778 -4.92 0.000 .4414153 .7035786

2011.25 | .5345205 .0627904 -5.33 0.000 .4245935 .6729076

2011.5 | .6058004 .0693677 -4.38 0.000 .4840185 .7582234

2011.75 | .4927716 .0604452 -5.77 0.000 .3874665 .6266964

2012 | .6115559 .07083 -4.25 0.000 .4873607 .7674

2012.25 | .5270897 .0577713 -5.84 0.000 .425196 .6534012

2012.5 | .5968536 .0699599 -4.40 0.000 .4743453 .7510019

2012.75 | .4923971 .059914 -5.82 0.000 .3879206 .6250116

2013 | .5194277 .0640922 -5.31 0.000 .4078451 .6615382

2013.25 | .4462328 .0616441 -5.84 0.000 .3403875 .5849914

2013.5 | .5863488 .0755109 -4.15 0.000 .455551 .7547014

2013.75 | .47332 .0621886 -5.69 0.000 .3658619 .6123399

2014 | .453147 .0632129 -5.67 0.000 .3447455 .5956343

2014.25 | .5003546 .0677203 -5.12 0.000 .3837713 .6523541

2014.5 | .5205855 .0657642 -5.17 0.000 .4064078 .6668408

2014.75 | .5222464 .0672963 -5.04 0.000 .4056863 .6722962

2015 | .4793704 .0662497 -5.32 0.000 .3656233 .6285049

2015.25 | .5101923 .0758865 -4.52 0.000 .3811759 .6828768

2015.5 | .6593186 .0904144 -3.04 0.002 .5039268 .8626274

2015.75 | .397703 .0613599 -5.98 0.000 .293921 .5381298

2016 | .5455742 .0767583 -4.31 0.000 .4140911 .718806

|

\_cons | .000018 1.41e-06 -139.27 0.000 .0000155 .000021

ln(hours) | 1 (exposure)

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

/lnalpha | -1.448973 .1249834 -1.693936 -1.20401

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

alpha | .2348114 .0293475 .1837948 .2999889

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

. lrtest pois nbin, stats force

Likelihood-ratio test LR chi2(1) = 288.04

(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 | 26,110 -19356.43 -18733.26 85 37636.53 38330.98

nbin | 26,110 -19051.14 -18589.24 86 37350.48 38053.11

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

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

. summ MR pcv2\_yhat

Variable | Obs Mean Std. Dev. Min Max

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

MR | 30,289 .4096207 .9550592 0 14

pcv2\_yhat | 26,110 .4640853 .6989414 .0000154 7.717805