. // Model C.V.2

.

. // poisson model

. glm dv `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 = -50665.47

Iteration 1: log pseudolikelihood = -47098.068

Iteration 2: log pseudolikelihood = -47080.797

Iteration 3: log pseudolikelihood = -47080.789

Iteration 4: log pseudolikelihood = -47080.789

Generalized linear models No. of obs = 26,110

Optimization : ML Residual df = 26,029

Scale parameter = 1

Deviance = 48446.00249 (1/df) Deviance = 1.861232

Pearson = 1178031.506 (1/df) Pearson = 45.25842

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

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

AIC = 3.612546

Log pseudolikelihood = -47080.78941 BIC = -216270.8

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

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

| Robust

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

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

p48\_1lag | .9966084 .0113693 -0.30 0.766 .9745722 1.019143

p75\_1lag | 1.000777 .0005063 1.54 0.125 .9997852 1.00177

mine\_time | 1.001037 .0015647 0.66 0.507 .9979748 1.004108

onsite\_insp\_hours | .9994236 .0001211 -4.76 0.000 .9991864 .999661

|

state |

AL | .9620488 .0835355 -0.45 0.656 .8114962 1.140532

AR | 1.78038 .0950119 10.81 0.000 1.603568 1.976687

CO | .6614724 .0683715 -4.00 0.000 .5401686 .8100171

IL | 1.264324 .0990764 2.99 0.003 1.084315 1.474216

IN | 1.09712 .136272 0.75 0.456 .8600574 1.399526

MD | 1.116125 .1362259 0.90 0.368 .8786617 1.417765

MT | .4987937 .0239713 -14.47 0.000 .4539558 .5480604

NM | .6833788 .0298487 -8.72 0.000 .6273105 .7444584

OH | .9227707 .0587965 -1.26 0.207 .8144369 1.045515

OK | 1.686051 .3176498 2.77 0.006 1.165482 2.439136

PA | 1.017167 .0994911 0.17 0.862 .8397202 1.232111

TN | 1.524117 .1519916 4.23 0.000 1.253524 1.853121

UT | .4454613 .0680037 -5.30 0.000 .3302679 .6008327

VA | .8373243 .0653096 -2.28 0.023 .718624 .9756312

WV | 1.033837 .0564697 0.61 0.542 .9288766 1.150657

WY | .6839537 .0293524 -8.85 0.000 .6287771 .743972

|

time |

2000.25 | .9232151 .0605667 -1.22 0.223 .8118215 1.049893

2000.5 | 1.041658 .0647284 0.66 0.511 .9222142 1.176573

2000.75 | .7687887 .0472233 -4.28 0.000 .6815871 .8671467

2001 | .7602055 .0427808 -4.87 0.000 .6808154 .8488532

2001.25 | .8180639 .0449548 -3.65 0.000 .7345332 .9110937

2001.75 | .7751745 .0371365 -5.32 0.000 .7057009 .8514874

2002 | .7981191 .0503543 -3.57 0.000 .7052845 .9031732

2002.25 | .7931258 .0470421 -3.91 0.000 .7060824 .8908996

2002.5 | .8755353 .0517141 -2.25 0.024 .7798244 .9829931

2002.75 | .7713983 .043574 -4.59 0.000 .6905527 .8617088

2003 | .6810514 .0412895 -6.34 0.000 .6047485 .7669816

2003.25 | .7324149 .0451241 -5.05 0.000 .6491046 .8264178

2003.5 | .8127215 .0498659 -3.38 0.001 .7206342 .9165763

2003.75 | .6269281 .0372284 -7.86 0.000 .558048 .7043102

2004 | .6375613 .041046 -6.99 0.000 .5619812 .723306

2004.25 | .6892474 .0438334 -5.85 0.000 .6084741 .780743

2004.5 | .7693405 .0492536 -4.10 0.000 .6786161 .8721938

2004.75 | .6050716 .0404484 -7.52 0.000 .5307681 .689777

2005 | .5897968 .0413657 -7.53 0.000 .5140472 .6767088

2005.25 | .6626572 .0453717 -6.01 0.000 .579439 .7578271

2005.5 | .7181851 .0488868 -4.86 0.000 .6284853 .8206872

2005.75 | .5991401 .0429134 -7.15 0.000 .5206683 .6894386

2006 | .609707 .0444383 -6.79 0.000 .5285446 .7033325

2006.25 | .5809293 .0406492 -7.76 0.000 .5064802 .666322

2006.5 | .717848 .0536199 -4.44 0.000 .6200858 .8310234

2006.75 | .5519801 .041945 -7.82 0.000 .4755985 .6406286

2007 | .5669454 .0423886 -7.59 0.000 .4896657 .6564214

2007.25 | .5986106 .0516364 -5.95 0.000 .5054979 .7088746

2007.5 | .6888194 .0512439 -5.01 0.000 .5953622 .796947

2007.75 | .6123606 .0439698 -6.83 0.000 .5319708 .7048987

2008 | .5680807 .040012 -8.03 0.000 .4948308 .6521738

2008.25 | .5603287 .0406152 -7.99 0.000 .4861204 .6458652

2008.5 | .6607214 .0535808 -5.11 0.000 .5636256 .774544

2008.75 | .5208045 .0423482 -8.02 0.000 .4440798 .6107852

2009 | .532748 .0395979 -8.47 0.000 .4605258 .6162964

2009.25 | .4900482 .041678 -8.39 0.000 .4148061 .5789384

2009.5 | .5593283 .0466461 -6.97 0.000 .4749846 .6586491

2009.75 | .4815279 .0363303 -9.69 0.000 .4153363 .5582682

2010 | .4887379 .0481089 -7.27 0.000 .4029842 .5927396

2010.25 | .4836988 .0446597 -7.87 0.000 .4036305 .5796503

2010.5 | .5730327 .0409612 -7.79 0.000 .4981204 .659211

2010.75 | .4609213 .0374616 -9.53 0.000 .3930475 .540516

2011 | .4732639 .0382033 -9.27 0.000 .4040096 .5543894

2011.25 | .4449802 .0354834 -10.15 0.000 .3805963 .5202558

2011.5 | .5163887 .0399762 -8.54 0.000 .4436914 .6009972

2011.75 | .3968935 .0317534 -11.55 0.000 .3392921 .464274

2012 | .439817 .0353067 -10.23 0.000 .3757865 .5147578

2012.25 | .3885798 .0317369 -11.57 0.000 .3311 .4560382

2012.5 | .4432947 .0377634 -9.55 0.000 .3751288 .5238472

2012.75 | .3565593 .0306931 -11.98 0.000 .3012029 .4220894

2013 | .3930489 .0344751 -10.65 0.000 .330968 .4667745

2013.25 | .3883631 .0371079 -9.90 0.000 .3220373 .4683492

2013.5 | .4479626 .0425715 -8.45 0.000 .371834 .5396776

2013.75 | .3369291 .0323522 -11.33 0.000 .2791293 .4066976

2014 | .3912549 .0391387 -9.38 0.000 .3215963 .4760018

2014.25 | .4085397 .0439314 -8.32 0.000 .3309041 .5043898

2014.5 | .4396425 .0421356 -8.57 0.000 .3643509 .5304926

2014.75 | .4069231 .0414332 -8.83 0.000 .3333054 .4968008

2015 | .3789614 .03963 -9.28 0.000 .3087311 .4651678

2015.25 | .351809 .0354238 -10.38 0.000 .2888014 .4285631

2015.5 | .4673793 .0475969 -7.47 0.000 .3828115 .5706293

2015.75 | .351741 .0396441 -9.27 0.000 .2820238 .4386926

2016 | .3948991 .0444891 -8.25 0.000 .3166578 .4924725

|

\_cons | .0001096 6.31e-06 -158.47 0.000 .0000979 .0001227

ln(hours) | 1 (exposure)

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

.

. quietly poisson dv `count\_lag\_1\_vars' `covariates' ib(freq).state ib(freq).time, vce(cl mineid) exposure(hours) iter(50) irr

. est store pois

. estat gof

Deviance goodness-of-fit = 48446

Prob > chi2(26029) = 0.0000

Pearson goodness-of-fit = 1178032

Prob > chi2(26029) = 0.0000

.

. pause "next"

.

. // negative binomial model

. glm dv `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 = -45262.052

Iteration 1: log pseudolikelihood = -44822.317

Iteration 2: log pseudolikelihood = -44819.324

Iteration 3: log pseudolikelihood = -44819.322

Generalized linear models No. of obs = 26,110

Optimization : ML Residual df = 26,029

Scale parameter = 1

Deviance = 20602.9202 (1/df) Deviance = .7915371

Pearson = 889583.8195 (1/df) Pearson = 34.17664

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

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

AIC = 3.43932

Log pseudolikelihood = -44819.32199 BIC = -244113.9

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

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| Robust

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

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

p48\_1lag | .9956595 .0091302 -0.47 0.635 .9779244 1.013716

p75\_1lag | 1.001985 .0005009 3.97 0.000 1.001003 1.002967

mine\_time | 1.001263 .0013554 0.93 0.351 .99861 1.003923

onsite\_insp\_hours | .9993522 .0001242 -5.22 0.000 .9991089 .9995956

|

state |

AL | 1.025382 .1060113 0.24 0.808 .8373029 1.255709

AR | 1.726303 .0782842 12.04 0.000 1.57949 1.886763

CO | .7917812 .1025153 -1.80 0.071 .6143225 1.020502

IL | 1.287347 .0781275 4.16 0.000 1.142977 1.449954

IN | 1.092198 .098287 0.98 0.327 .915591 1.30287

MD | 1.300407 .2381349 1.43 0.151 .9082478 1.86189

MT | .5629561 .0210543 -15.36 0.000 .5231665 .6057719

NM | .7440453 .0287409 -7.65 0.000 .6897938 .8025635

OH | .9718577 .0815931 -0.34 0.734 .8244027 1.145687

OK | 1.814518 .3115411 3.47 0.001 1.296031 2.540429

PA | 1.360633 .1036409 4.04 0.000 1.171936 1.579712

TN | 1.758629 .1818309 5.46 0.000 1.436036 2.153689

UT | .5280847 .0970336 -3.47 0.001 .3683821 .7570224

VA | .9330544 .0476437 -1.36 0.175 .8441951 1.031267

WV | 1.275836 .0606545 5.12 0.000 1.162326 1.400432

WY | .7478908 .0279075 -7.79 0.000 .6951455 .8046384

|

time |

2000.25 | .9970908 .0757022 -0.04 0.969 .8592289 1.157072

2000.5 | 1.053069 .0758594 0.72 0.473 .9144064 1.212759

2000.75 | .7251398 .0536335 -4.35 0.000 .6272843 .8382606

2001 | .7428255 .0503774 -4.38 0.000 .6503685 .8484262

2001.25 | .8970822 .0679642 -1.43 0.152 .7732929 1.040688

2001.75 | .7945407 .049919 -3.66 0.000 .7024853 .8986592

2002 | .8739755 .0990753 -1.19 0.235 .699851 1.091422

2002.25 | .8299273 .0603341 -2.56 0.010 .7197131 .9570194

2002.5 | .9142184 .0646879 -1.27 0.205 .7958312 1.050217

2002.75 | .704818 .0512299 -4.81 0.000 .6112335 .812731

2003 | .707957 .0578164 -4.23 0.000 .603243 .8308479

2003.25 | .7645296 .071782 -2.86 0.004 .6360257 .9189967

2003.5 | .8632916 .0663399 -1.91 0.056 .7425858 1.003618

2003.75 | .6062789 .0470244 -6.45 0.000 .5207764 .7058195

2004 | .6501263 .0537143 -5.21 0.000 .5529301 .7644079

2004.25 | .6709328 .0532077 -5.03 0.000 .5743482 .7837594

2004.5 | .7449324 .0568788 -3.86 0.000 .6413926 .8651866

2004.75 | .5824817 .0444742 -7.08 0.000 .5015227 .6765096

2005 | .598427 .0482006 -6.37 0.000 .511035 .7007639

2005.25 | .6366826 .0478918 -6.00 0.000 .5494078 .7378212

2005.5 | .6895248 .0527526 -4.86 0.000 .59351 .8010723

2005.75 | .5595438 .0461719 -7.04 0.000 .4759873 .6577681

2006 | .6310379 .054396 -5.34 0.000 .5329435 .7471877

2006.25 | .6022187 .049799 -6.13 0.000 .5121134 .7081778

2006.5 | .6860517 .0546508 -4.73 0.000 .5868813 .8019799

2006.75 | .5560749 .0466792 -6.99 0.000 .4717153 .655521

2007 | .5309076 .043043 -7.81 0.000 .4529063 .6223425

2007.25 | .5931969 .0523725 -5.92 0.000 .4989391 .7052616

2007.5 | .7031119 .0694507 -3.57 0.000 .5793568 .8533021

2007.75 | .5655663 .0491585 -6.56 0.000 .4769776 .6706086

2008 | .5327849 .0442175 -7.59 0.000 .4528017 .6268964

2008.25 | .5329377 .0458747 -7.31 0.000 .4502005 .6308803

2008.5 | .5757736 .0505688 -6.29 0.000 .4847222 .6839284

2008.75 | .471394 .0407057 -8.71 0.000 .3979984 .5583246

2009 | .4928443 .0412821 -8.45 0.000 .4182256 .5807763

2009.25 | .4747088 .0436608 -8.10 0.000 .3964049 .5684805

2009.5 | .5307481 .0479868 -7.01 0.000 .4445579 .6336488

2009.75 | .4498612 .0395475 -9.09 0.000 .3786595 .5344513

2010 | .4525785 .0408406 -8.79 0.000 .3792117 .5401397

2010.25 | .4497939 .0472831 -7.60 0.000 .3660445 .5527048

2010.5 | .5813921 .0494171 -6.38 0.000 .4921741 .6867829

2010.75 | .4512226 .0421905 -8.51 0.000 .3756654 .5419765

2011 | .4587913 .0409678 -8.73 0.000 .3851298 .5465416

2011.25 | .4363484 .0379743 -9.53 0.000 .3679218 .517501

2011.5 | .4955076 .0414251 -8.40 0.000 .4206189 .5837298

2011.75 | .3844046 .0333221 -11.03 0.000 .3243412 .4555908

2012 | .4346405 .039633 -9.14 0.000 .3635069 .5196939

2012.25 | .3760057 .0329349 -11.17 0.000 .3166916 .446429

2012.5 | .4341317 .042485 -8.53 0.000 .3583615 .5259225

2012.75 | .3273307 .0322791 -11.32 0.000 .2698032 .3971241

2013 | .3853442 .0386853 -9.50 0.000 .3165157 .4691399

2013.25 | .3612099 .0344414 -10.68 0.000 .2996384 .4354335

2013.5 | .4254497 .041693 -8.72 0.000 .3511015 .5155416

2013.75 | .3124091 .0314174 -11.57 0.000 .2565208 .3804738

2014 | .3612766 .0354261 -10.38 0.000 .2981073 .4378316

2014.25 | .3731321 .0386045 -9.53 0.000 .3046468 .457013

2014.5 | .3930437 .039126 -9.38 0.000 .3233754 .4777214

2014.75 | .3935084 .0407313 -9.01 0.000 .3212535 .4820146

2015 | .3396405 .0342701 -10.70 0.000 .278697 .4139108

2015.25 | .3314846 .0335883 -10.90 0.000 .2717776 .4043086

2015.5 | .4314079 .0436846 -8.30 0.000 .3537487 .5261157

2015.75 | .3451354 .0384574 -9.55 0.000 .2774232 .4293746

2016 | .3566877 .0411908 -8.93 0.000 .2844397 .4472869

|

\_cons | .000103 6.46e-06 -146.25 0.000 .0000911 .0001165

ln(hours) | 1 (exposure)

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

.

. pause "next"

.

. eststo clear

. eststo: nbreg dv `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 = -48983.728

Iteration 1: log pseudolikelihood = -47099.237

Iteration 2: log pseudolikelihood = -47080.796

Iteration 3: log pseudolikelihood = -47080.789

Iteration 4: log pseudolikelihood = -47080.789

Fitting constant-only model:

Iteration 0: log pseudolikelihood = -45952.202

Iteration 1: log pseudolikelihood = -45236.026

Iteration 2: log pseudolikelihood = -45205.288

Iteration 3: log pseudolikelihood = -45205.217

Iteration 4: log pseudolikelihood = -45205.217

Fitting full model:

Iteration 0: log pseudolikelihood = -43893.752

Iteration 1: log pseudolikelihood = -43668.438

Iteration 2: log pseudolikelihood = -43663.679

Iteration 3: log pseudolikelihood = -43663.677

Negative binomial regression Number of obs = 26,110

Wald chi2(80) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -43663.677 Pseudo R2 = 0.0341

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

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

| Robust

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

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

p48\_1lag | .994541 .0086025 -0.63 0.527 .9778224 1.011545

p75\_1lag | 1.001611 .0004751 3.39 0.001 1.00068 1.002542

mine\_time | 1.001055 .0013297 0.79 0.427 .9984523 1.003664

onsite\_insp\_hours | .9993815 .0001227 -5.04 0.000 .9991411 .9996219

|

state |

AL | 1.015574 .096451 0.16 0.871 .8430853 1.223353

AR | 1.78526 .0796985 12.98 0.000 1.635693 1.948504

CO | .7452063 .0910182 -2.41 0.016 .5865597 .946762

IL | 1.269456 .0750471 4.04 0.000 1.130568 1.425406

IN | 1.095268 .1061341 0.94 0.348 .9058098 1.324353

MD | 1.232314 .1862158 1.38 0.167 .9164224 1.657094

MT | .5449683 .0212271 -15.58 0.000 .5049124 .5882019

NM | .7387683 .0281121 -7.96 0.000 .6856741 .7959738

OH | .96744 .0721752 -0.44 0.657 .8358353 1.119766

OK | 1.781134 .3070376 3.35 0.001 1.270468 2.497062

PA | 1.296159 .1046401 3.21 0.001 1.106471 1.518366

TN | 1.679459 .1665215 5.23 0.000 1.382838 2.039707

UT | .4965569 .0847606 -4.10 0.000 .3553626 .6938511

VA | .9165349 .0492049 -1.62 0.104 .8249956 1.018231

WV | 1.209714 .0572299 4.02 0.000 1.102589 1.327247

WY | .7391693 .0271707 -8.22 0.000 .6877888 .7943881

|

time |

2000.25 | .9819703 .0646751 -0.28 0.782 .86305 1.117277

2000.5 | 1.056425 .0655223 0.89 0.376 .9355026 1.192978

2000.75 | .7508527 .0495715 -4.34 0.000 .6597177 .8545773

2001 | .7522141 .0441845 -4.85 0.000 .6704131 .8439962

2001.25 | .8716158 .055349 -2.16 0.030 .7696131 .9871376

2001.75 | .791482 .0432367 -4.28 0.000 .7111186 .8809273

2002 | .8413901 .0661187 -2.20 0.028 .7212864 .9814928

2002.25 | .8226477 .0527932 -3.04 0.002 .7254179 .9329096

2002.5 | .9058566 .0571066 -1.57 0.117 .8005683 1.024992

2002.75 | .7323626 .0453384 -5.03 0.000 .6486805 .82684

2003 | .7009521 .0491106 -5.07 0.000 .6110135 .8041293

2003.25 | .7441949 .0546636 -4.02 0.000 .6444112 .8594295

2003.5 | .8480752 .0546001 -2.56 0.010 .7475374 .9621344

2003.75 | .6192584 .0415883 -7.14 0.000 .5428835 .7063779

2004 | .6570367 .047608 -5.80 0.000 .5700498 .7572975

2004.25 | .686332 .0469283 -5.50 0.000 .600251 .7847578

2004.5 | .7677227 .0514523 -3.94 0.000 .6732205 .8754904

2004.75 | .6039099 .0418134 -7.28 0.000 .5272747 .6916836

2005 | .6022899 .0429004 -7.12 0.000 .523812 .6925253

2005.25 | .6514143 .0441325 -6.33 0.000 .570413 .7439181

2005.5 | .7050142 .0482847 -5.10 0.000 .6164547 .806296

2005.75 | .5819862 .0434771 -7.25 0.000 .5027174 .6737542

2006 | .6294844 .0479854 -6.07 0.000 .5421234 .7309234

2006.25 | .6079449 .0449351 -6.73 0.000 .5259558 .7027148

2006.5 | .7078553 .0510079 -4.79 0.000 .6146206 .8152333

2006.75 | .559856 .0421401 -7.71 0.000 .4830664 .6488524

2007 | .5517354 .0406984 -8.06 0.000 .4774661 .6375572

2007.25 | .6047664 .0502304 -6.05 0.000 .5139123 .7116826

2007.5 | .7056772 .058648 -4.19 0.000 .5996028 .830517

2007.75 | .5853226 .0443031 -7.08 0.000 .5046239 .6789266

2008 | .5469653 .039749 -8.30 0.000 .4743526 .6306933

2008.25 | .5431245 .0414794 -7.99 0.000 .4676184 .6308225

2008.5 | .6057868 .0485268 -6.26 0.000 .5177664 .7087706

2008.75 | .4910965 .0384326 -9.09 0.000 .4212626 .572507

2009 | .5031904 .0371036 -9.31 0.000 .4354793 .5814296

2009.25 | .4792855 .039441 -8.94 0.000 .4078946 .5631715

2009.5 | .543326 .0440013 -7.53 0.000 .4635814 .6367883

2009.75 | .4615127 .036131 -9.88 0.000 .3958628 .5380501

2010 | .4647236 .0392996 -9.06 0.000 .3937427 .5485005

2010.25 | .4638701 .04502 -7.91 0.000 .3835171 .5610584

2010.5 | .5820235 .0442609 -7.12 0.000 .5014292 .6755717

2010.75 | .4569414 .0379262 -9.44 0.000 .3883386 .5376633

2011 | .4658132 .0371627 -9.58 0.000 .3983847 .5446543

2011.25 | .4395526 .0343037 -10.53 0.000 .3772082 .5122012

2011.5 | .5081135 .0381638 -9.01 0.000 .438559 .5886992

2011.75 | .3902077 .0304139 -12.07 0.000 .3349275 .4546119

2012 | .4372478 .035135 -10.30 0.000 .3735334 .5118301

2012.25 | .3793972 .0297539 -12.36 0.000 .3253415 .4424344

2012.5 | .435232 .0376783 -9.61 0.000 .3673092 .5157152

2012.75 | .338126 .0299703 -12.23 0.000 .2842046 .4022778

2013 | .3854752 .0335177 -10.96 0.000 .3250746 .4570985

2013.25 | .3693389 .03224 -11.41 0.000 .3112596 .4382555

2013.5 | .429085 .0385031 -9.43 0.000 .3598839 .5115925

2013.75 | .3202316 .029671 -12.29 0.000 .2670524 .3840008

2014 | .3691089 .0337204 -10.91 0.000 .3085972 .4414862

2014.25 | .3811648 .036626 -10.04 0.000 .3157338 .4601554

2014.5 | .4050711 .0369464 -9.91 0.000 .3387611 .4843608

2014.75 | .394207 .0371262 -9.88 0.000 .3277621 .4741218

2015 | .351392 .0333689 -11.01 0.000 .2917158 .423276

2015.25 | .3373212 .0318819 -11.50 0.000 .2802803 .4059709

2015.5 | .4449886 .0421744 -8.54 0.000 .3695516 .5358248

2015.75 | .3470847 .0366163 -10.03 0.000 .2822517 .4268098

2016 | .371537 .0406937 -9.04 0.000 .2997586 .4605029

|

\_cons | .0001035 5.82e-06 -163.20 0.000 .0000927 .0001156

ln(hours) | 1 (exposure)

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

/lnalpha | -1.021108 .0672329 -1.152883 -.8893342

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

alpha | .3601955 .024217 .3157254 .4109293

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

(est1 stored)

. esttab using `"`directory'Model.`injury\_label'.`time\_label'.`violation\_level\_label'.C.V.2.csv"', replace plain wide p eform

(note: file C:\Users\jbodson\Dropbox (Stanford Law School)\R-code\Injury-Classification\PS Model Summaries 10-10\Estout\Model.PS.Q.P.C.V.2.csv not found)

(output written to C:\Users\jbodson\Dropbox (Stanford Law School)\R-code\Injury-Classification\PS Model Summaries 10-10\Estout\Model.PS.Q.P.C.V.2.csv)

. est store nbin

.

. pause "next"

.

. // test for over-dispersion

. lrtest pois nbin, stats force

Likelihood-ratio test LR chi2(1) = 6834.22

(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 -51293.53 -47080.79 81 94323.58 94985.35

nbin | 26,110 -45205.22 -43663.68 82 87491.35 88161.3

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

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

.

. pause "next"

.

. // final model + diagnostics/assessment

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

. predict cv2\_yhat

(option n assumed; predicted number of events)

(4,179 missing values generated)

. gen cv2\_res = dv - cv2\_yhat

(4,179 missing values generated)

.

. summ dv cv2\_yhat

Variable | Obs Mean Std. Dev. Min Max

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

dv | 30,289 2.177721 3.851734 0 71

cv2\_yhat | 26,110 2.569009 3.806056 .0000994 42.60742

. /\*

> pause "next"

>

> scatter dv cv2\_yhat

>

> pause "next"

>

> scatter cv2\_res dv

>

> pause "next"

>

> scatter cv2\_res cv2\_yhat

> \*/

. pause "complete: C.V.2"