. // Model C.PP.3

.

. // poisson model

. glm dv `pp\_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 = -44767.667

Iteration 1: log pseudolikelihood = -41812.637

Iteration 2: log pseudolikelihood = -41801.161

Iteration 3: log pseudolikelihood = -41801.158

Generalized linear models No. of obs = 22,446

Optimization : ML Residual df = 22,368

Scale parameter = 1

Deviance = 42518.48461 (1/df) Deviance = 1.900862

Pearson = 1095514.968 (1/df) Pearson = 48.97689

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

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

AIC = 3.731548

Log pseudolikelihood = -41801.15795 BIC = -181583.5

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

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

| Robust

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

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

p48\_pp\_c\_4lag | 1.000102 .0000972 1.05 0.294 .9999114 1.000293

p75\_pp\_c\_4lag | 1.000004 2.12e-06 1.83 0.067 .9999997 1.000008

mine\_time | 1.00024 .0016391 0.15 0.884 .9970324 1.003457

onsite\_insp\_hours | .9994162 .0001603 -3.64 0.000 .9991021 .9997305

|

state |

AL | .9695787 .0844419 -0.35 0.723 .8174304 1.150046

AR | 1.867983 .105214 11.09 0.000 1.672742 2.086012

CO | .6616501 .0688779 -3.97 0.000 .5395332 .8114067

IL | 1.277308 .1108056 2.82 0.005 1.077592 1.514038

IN | 1.083847 .1324594 0.66 0.510 .8529839 1.377195

MD | 1.14347 .1420763 1.08 0.281 .8963194 1.458769

MT | .5207284 .0249636 -13.61 0.000 .474029 .5720285

NM | .6830358 .0309072 -8.42 0.000 .6250673 .7463803

OH | .9127176 .0602408 -1.38 0.166 .8019657 1.038764

OK | 1.52153 .2768088 2.31 0.021 1.065181 2.173391

PA | 1.014928 .1046938 0.14 0.886 .8291446 1.242338

TN | 1.492844 .173499 3.45 0.001 1.188741 1.874741

UT | .4385718 .0686202 -5.27 0.000 .3227448 .5959668

VA | .8227988 .0676344 -2.37 0.018 .7003652 .9666354

WV | 1.023588 .0586442 0.41 0.684 .9148662 1.145231

WY | .6899299 .0303253 -8.44 0.000 .6329816 .7520017

|

time |

2000.75 | 1.481843 .1141336 5.11 0.000 1.274211 1.723308

2001 | 1.472949 .1166072 4.89 0.000 1.261251 1.72018

2001.25 | 1.555924 .1257536 5.47 0.000 1.327982 1.822991

2001.5 | 1.922211 .1633374 7.69 0.000 1.627313 2.270548

2001.75 | 1.510877 .1284069 4.86 0.000 1.279049 1.784725

2002 | 1.575246 .1140143 6.28 0.000 1.366908 1.815337

2002.25 | 1.56899 .1153453 6.13 0.000 1.35845 1.812161

2002.5 | 1.685456 .1359706 6.47 0.000 1.438959 1.974178

2002.75 | 1.517891 .1124398 5.63 0.000 1.312764 1.75507

2003 | 1.312756 .09058 3.94 0.000 1.146704 1.502854

2003.25 | 1.443851 .1175133 4.51 0.000 1.230961 1.693561

2003.5 | 1.566939 .1087588 6.47 0.000 1.36764 1.795282

2003.75 | 1.237692 .0940236 2.81 0.005 1.066472 1.436401

2004 | 1.249747 .0925949 3.01 0.003 1.080826 1.445069

2004.25 | 1.365504 .0916027 4.64 0.000 1.197269 1.55738

2004.5 | 1.510489 .1095399 5.69 0.000 1.310355 1.74119

2004.75 | 1.208971 .096196 2.38 0.017 1.034396 1.413008

2005 | 1.160706 .081416 2.12 0.034 1.011617 1.331768

2005.25 | 1.303212 .0916184 3.77 0.000 1.135465 1.49574

2005.5 | 1.422744 .1135527 4.42 0.000 1.216719 1.663655

2005.75 | 1.193789 .090924 2.33 0.020 1.028245 1.385986

2006 | 1.192643 .0832926 2.52 0.012 1.040073 1.367594

2006.25 | 1.145 .0826703 1.88 0.061 .993912 1.319056

2006.5 | 1.431796 .093621 5.49 0.000 1.259574 1.627567

2006.75 | 1.088862 .0725218 1.28 0.201 .9556084 1.240697

2007 | 1.123196 .0754116 1.73 0.084 .9847042 1.281166

2007.25 | 1.144273 .0925584 1.67 0.096 .9765112 1.340855

2007.5 | 1.330198 .0812283 4.67 0.000 1.180152 1.499322

2007.75 | 1.196297 .070156 3.06 0.002 1.066402 1.342014

2008 | 1.079613 .0623114 1.33 0.184 .9641397 1.208917

2008.25 | 1.059054 .0694115 0.88 0.381 .9313855 1.204222

2008.5 | 1.26423 .0698415 4.24 0.000 1.134494 1.408802

2009 | .9925241 .0507602 -0.15 0.883 .8978597 1.097169

2009.25 | .9236658 .0524333 -1.40 0.162 .8264092 1.032368

2009.5 | 1.060498 .0529454 1.18 0.239 .9616425 1.169516

2009.75 | .9163917 .0534069 -1.50 0.134 .8174731 1.02728

2010 | .9243245 .0678206 -1.07 0.283 .8005143 1.067283

2010.25 | .9189957 .0659033 -1.18 0.239 .7984944 1.057682

2010.5 | 1.090452 .0641623 1.47 0.141 .9716763 1.223746

2010.75 | .8775441 .0509911 -2.25 0.025 .7830843 .9833982

2011 | .8943412 .053296 -1.87 0.061 .7957525 1.005144

2011.25 | .8425458 .0500519 -2.88 0.004 .7499414 .9465851

2011.5 | .9766984 .053952 -0.43 0.670 .8764777 1.088379

2011.75 | .7542969 .0435606 -4.88 0.000 .6735743 .8446934

2012 | .8342211 .0518329 -2.92 0.004 .7385726 .9422564

2012.25 | .7409171 .0434743 -5.11 0.000 .6604261 .8312181

2012.5 | .8546889 .0564573 -2.38 0.017 .7508983 .9728257

2012.75 | .6846185 .0505528 -5.13 0.000 .5923729 .7912287

2013 | .7516182 .0542761 -3.95 0.000 .652424 .8658937

2013.25 | .7441249 .0608832 -3.61 0.000 .6338723 .8735543

2013.5 | .8579876 .0724303 -1.81 0.070 .7271493 1.012368

2013.75 | .6444458 .0544506 -5.20 0.000 .5460929 .7605123

2014 | .7445197 .0601047 -3.65 0.000 .6355638 .8721542

2014.25 | .779407 .0730208 -2.66 0.008 .6486601 .9365078

2014.5 | .8475562 .0648878 -2.16 0.031 .7294603 .9847712

2014.75 | .7793198 .0599415 -3.24 0.001 .6702633 .9061206

2015 | .7272011 .0613046 -3.78 0.000 .6164481 .8578525

2015.25 | .6693194 .0516806 -5.20 0.000 .5753194 .7786777

2015.5 | .8930686 .076246 -1.32 0.185 .755463 1.055739

2015.75 | .6742698 .0665564 -3.99 0.000 .5556645 .8181912

2016 | .752194 .0738099 -2.90 0.004 .6205899 .9117065

|

\_cons | .0000582 4.23e-06 -133.95 0.000 .0000504 .0000671

ln(hours) | 1 (exposure)

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

.

. quietly poisson dv `pp\_lag\_4\_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 = 42518.48

Prob > chi2(22367) = 0.0000

Pearson goodness-of-fit = 1095515

Prob > chi2(22367) = 0.0000

.

. pause "next"

.

. // negative binomial model

. glm dv `pp\_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 = -40213.888

Iteration 1: log pseudolikelihood = -39838.219

Iteration 2: log pseudolikelihood = -39835.625

Iteration 3: log pseudolikelihood = -39835.623

Generalized linear models No. of obs = 22,446

Optimization : ML Residual df = 22,368

Scale parameter = 1

Deviance = 17492.69134 (1/df) Deviance = .7820409

Pearson = 816435.6825 (1/df) Pearson = 36.50016

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

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

AIC = 3.556413

Log pseudolikelihood = -39835.62321 BIC = -206609.3

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

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| Robust

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

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

p48\_pp\_c\_4lag | 1.000059 .0001147 0.52 0.606 .9998343 1.000284

p75\_pp\_c\_4lag | 1.000007 2.25e-06 3.01 0.003 1.000002 1.000011

mine\_time | 1.000544 .0014744 0.37 0.712 .9976581 1.003438

onsite\_insp\_hours | .9993866 .0001417 -4.33 0.000 .9991088 .9996644

|

state |

AL | 1.056489 .1123786 0.52 0.605 .8576747 1.301389

AR | 1.80245 .0890383 11.93 0.000 1.63612 1.985689

CO | .7981436 .1053032 -1.71 0.087 .6162793 1.033676

IL | 1.319065 .0845289 4.32 0.000 1.163374 1.495593

IN | 1.083353 .1030929 0.84 0.400 .8990189 1.305483

MD | 1.35307 .2549163 1.60 0.108 .9353096 1.957426

MT | .5966779 .0239589 -12.86 0.000 .5515196 .6455336

NM | .7520089 .0310845 -6.90 0.000 .693487 .8154692

OH | .9784029 .0935613 -0.23 0.819 .8111856 1.18009

OK | 1.65502 .2844947 2.93 0.003 1.181635 2.318051

PA | 1.356638 .1098432 3.77 0.000 1.157563 1.58995

TN | 1.722646 .2207463 4.24 0.000 1.340046 2.214482

UT | .5323609 .105211 -3.19 0.001 .3613952 .7842057

VA | .9173415 .0490061 -1.61 0.106 .8261487 1.0186

WV | 1.277441 .066019 4.74 0.000 1.154384 1.413617

WY | .7725562 .0279734 -7.13 0.000 .7196295 .8293754

|

time |

2000.75 | 1.500554 .1222344 4.98 0.000 1.279126 1.760314

2001 | 1.588794 .1312235 5.61 0.000 1.351339 1.867975

2001.25 | 1.842001 .214158 5.25 0.000 1.466648 2.313416

2001.5 | 2.072863 .1873253 8.07 0.000 1.73639 2.474537

2001.75 | 1.691912 .1519602 5.85 0.000 1.418818 2.017572

2002 | 1.904512 .2518916 4.87 0.000 1.469615 2.468107

2002.25 | 1.796207 .1681027 6.26 0.000 1.495183 2.157835

2002.5 | 1.890271 .1795125 6.70 0.000 1.569236 2.276982

2002.75 | 1.518766 .1198353 5.30 0.000 1.301153 1.772773

2003 | 1.474605 .1238962 4.62 0.000 1.250714 1.738576

2003.25 | 1.666117 .1647708 5.16 0.000 1.372543 2.022484

2003.5 | 1.773914 .1434751 7.09 0.000 1.513864 2.078634

2003.75 | 1.314335 .1109197 3.24 0.001 1.113964 1.550747

2004 | 1.375269 .1158143 3.78 0.000 1.166021 1.622068

2004.25 | 1.427186 .1147086 4.43 0.000 1.219175 1.670686

2004.5 | 1.569468 .122331 5.78 0.000 1.347119 1.828516

2004.75 | 1.276727 .1044341 2.99 0.003 1.087605 1.498735

2005 | 1.280428 .1014756 3.12 0.002 1.096216 1.495595

2005.25 | 1.357982 .1029734 4.04 0.000 1.17044 1.575576

2005.5 | 1.489683 .1127595 5.27 0.000 1.284291 1.727923

2005.75 | 1.213919 .0984819 2.39 0.017 1.035462 1.423133

2006 | 1.337511 .106994 3.64 0.000 1.14342 1.564549

2006.25 | 1.284681 .1003471 3.21 0.001 1.10232 1.497212

2006.5 | 1.518355 .1114821 5.69 0.000 1.314849 1.75336

2006.75 | 1.192799 .0954751 2.20 0.028 1.019611 1.395404

2007 | 1.14136 .0834103 1.81 0.070 .9890469 1.317128

2007.25 | 1.191711 .0911926 2.29 0.022 1.025735 1.384545

2007.5 | 1.482141 .1256431 4.64 0.000 1.255255 1.750036

2007.75 | 1.232341 .0891536 2.89 0.004 1.069427 1.420075

2008 | 1.099879 .0775608 1.35 0.177 .9578997 1.262902

2008.25 | 1.093454 .078251 1.25 0.212 .9503549 1.2581

2008.5 | 1.200853 .0775053 2.84 0.005 1.058161 1.362787

2009 | .9823436 .0644865 -0.27 0.786 .8637455 1.117226

2009.25 | .9746329 .074589 -0.34 0.737 .838877 1.132358

2009.5 | 1.101971 .0745793 1.43 0.151 .9650777 1.258281

2009.75 | .9244053 .0666697 -1.09 0.276 .8025503 1.064762

2010 | .9309598 .0727526 -0.92 0.360 .7987508 1.085052

2010.25 | .9293578 .0894246 -0.76 0.446 .7696242 1.122244

2010.5 | 1.196805 .0880209 2.44 0.015 1.036145 1.382377

2010.75 | .9308706 .0739633 -0.90 0.367 .7966293 1.087733

2011 | .9267346 .0675579 -1.04 0.297 .803348 1.069072

2011.25 | .8854992 .0649866 -1.66 0.098 .7668647 1.022487

2011.5 | 1.005342 .0666084 0.08 0.936 .8829131 1.144748

2011.75 | .783796 .0571703 -3.34 0.001 .6793854 .9042528

2012 | .880812 .0694739 -1.61 0.108 .7546488 1.028067

2012.25 | .7752056 .0563618 -3.50 0.000 .6722483 .8939311

2012.5 | .9188751 .0781318 -1.00 0.320 .7778198 1.08551

2012.75 | .6848889 .0591649 -4.38 0.000 .5782134 .8112452

2013 | .7950787 .0684048 -2.67 0.008 .6717022 .9411167

2013.25 | .7443531 .0632055 -3.48 0.001 .6302323 .8791386

2013.5 | .8813397 .0758773 -1.47 0.142 .7444932 1.04334

2013.75 | .640863 .058425 -4.88 0.000 .5359996 .7662419

2014 | .7398004 .0624138 -3.57 0.000 .6270503 .8728241

2014.25 | .7737212 .0685503 -2.90 0.004 .6503836 .9204485

2014.5 | .8176819 .0714925 -2.30 0.021 .6889078 .970527

2014.75 | .8146718 .0726882 -2.30 0.022 .683967 .9703539

2015 | .7084469 .0608382 -4.01 0.000 .5987009 .83831

2015.25 | .6698001 .0583603 -4.60 0.000 .5646498 .7945316

2015.5 | .887699 .0795695 -1.33 0.184 .7446766 1.05819

2015.75 | .713017 .0716651 -3.37 0.001 .5855256 .868268

2016 | .7214039 .0737896 -3.19 0.001 .5903538 .8815452

|

\_cons | .0000506 3.55e-06 -140.93 0.000 .0000441 .0000581

ln(hours) | 1 (exposure)

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

.

. pause "next"

.

. eststo clear

. eststo: nbreg dv `pp\_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 = -42141.211

Iteration 1: log pseudolikelihood = -41801.898

Iteration 2: log pseudolikelihood = -41801.158

Iteration 3: log pseudolikelihood = -41801.158

Fitting constant-only model:

Iteration 0: log pseudolikelihood = -40773.93

Iteration 1: log pseudolikelihood = -40071.319

Iteration 2: log pseudolikelihood = -40040.125

Iteration 3: log pseudolikelihood = -40040.039

Iteration 4: log pseudolikelihood = -40040.039

Fitting full model:

Iteration 0: log pseudolikelihood = -38916.974

Iteration 1: log pseudolikelihood = -38723.08

Iteration 2: log pseudolikelihood = -38719.075

Iteration 3: log pseudolikelihood = -38719.073

Negative binomial regression Number of obs = 22,446

Wald chi2(77) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -38719.073 Pseudo R2 = 0.0330

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

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

| Robust

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

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

p48\_pp\_c\_4lag | 1.000052 .0000965 0.54 0.588 .9998633 1.000241

p75\_pp\_c\_4lag | 1.000006 2.11e-06 2.97 0.003 1.000002 1.00001

mine\_time | 1.000205 .0014398 0.14 0.887 .9973869 1.003031

onsite\_insp\_hours | .9993904 .0001394 -4.37 0.000 .9991171 .9996637

|

state |

AL | 1.040718 .1007561 0.41 0.680 .8608445 1.258176

AR | 1.872137 .089715 13.09 0.000 1.704304 2.056497

CO | .7477745 .0921447 -2.36 0.018 .5873286 .9520508

IL | 1.292682 .0830733 3.99 0.000 1.139698 1.466201

IN | 1.085601 .1091126 0.82 0.414 .8914904 1.321976

MD | 1.267207 .1951077 1.54 0.124 .9371109 1.71358

MT | .57233 .0238231 -13.41 0.000 .5274915 .6209799

NM | .7427519 .0300011 -7.36 0.000 .6862182 .8039431

OH | .9666836 .0802034 -0.41 0.683 .8216033 1.137382

OK | 1.616032 .2748068 2.82 0.005 1.157985 2.255263

PA | 1.287579 .1090674 2.98 0.003 1.090614 1.520117

TN | 1.641012 .1966976 4.13 0.000 1.29743 2.075582

UT | .4944265 .0890214 -3.91 0.000 .3474106 .703656

VA | .9001742 .0510021 -1.86 0.063 .8055623 1.005898

WV | 1.202366 .0610606 3.63 0.000 1.088453 1.328202

WY | .7546673 .0277422 -7.66 0.000 .7022061 .8110477

|

time |

2000.75 | 1.505429 .1170883 5.26 0.000 1.292576 1.753333

2001 | 1.542036 .1187067 5.63 0.000 1.326076 1.793165

2001.25 | 1.720855 .1609748 5.80 0.000 1.432584 2.067134

2001.5 | 2.000044 .1642645 8.44 0.000 1.702668 2.349358

2001.75 | 1.615489 .1334005 5.81 0.000 1.37409 1.899296

2002 | 1.749731 .1643507 5.96 0.000 1.455522 2.10341

2002.25 | 1.710072 .1410796 6.50 0.000 1.454758 2.010193

2002.5 | 1.808041 .150922 7.10 0.000 1.53517 2.129415

2002.75 | 1.517688 .1118513 5.66 0.000 1.313561 1.753537

2003 | 1.404079 .1053721 4.52 0.000 1.212024 1.626566

2003.25 | 1.548671 .1265558 5.35 0.000 1.319471 1.817684

2003.5 | 1.688017 .1243156 7.11 0.000 1.461131 1.950134

2003.75 | 1.288094 .101394 3.22 0.001 1.103937 1.502972

2004 | 1.344443 .1066832 3.73 0.000 1.150797 1.570675

2004.25 | 1.416044 .1034763 4.76 0.000 1.227089 1.634097

2004.5 | 1.565292 .1149303 6.10 0.000 1.355491 1.807566

2004.75 | 1.273462 .1002645 3.07 0.002 1.091359 1.485951

2005 | 1.23845 .0905146 2.93 0.003 1.073165 1.429191

2005.25 | 1.340059 .0942213 4.16 0.000 1.167548 1.538059

2005.5 | 1.467443 .1050772 5.36 0.000 1.275294 1.688543

2005.75 | 1.219623 .0949242 2.55 0.011 1.047071 1.420612

2006 | 1.286988 .0946579 3.43 0.001 1.114214 1.486553

2006.25 | 1.251724 .0927421 3.03 0.002 1.082534 1.447356

2006.5 | 1.501339 .1029829 5.92 0.000 1.312476 1.717379

2006.75 | 1.15815 .0848762 2.00 0.045 1.003191 1.337045

2007 | 1.146318 .0800037 1.96 0.050 .9997657 1.314353

2007.25 | 1.186402 .0924311 2.19 0.028 1.018394 1.382127

2007.5 | 1.427852 .1030824 4.93 0.000 1.239457 1.644883

2007.75 | 1.215623 .0788209 3.01 0.003 1.07055 1.380355

2008 | 1.087405 .0688856 1.32 0.186 .9604368 1.231158

2008.25 | 1.072389 .0723756 1.04 0.300 .9395168 1.224052

2008.5 | 1.218345 .0728363 3.30 0.001 1.083634 1.369801

2009 | .9696701 .0556718 -0.54 0.592 .8664707 1.085161

2009.25 | .9463362 .0644911 -0.81 0.418 .828014 1.081567

2009.5 | 1.081827 .0656085 1.30 0.195 .9605851 1.218372

2009.75 | .9145203 .0606424 -1.35 0.178 .803063 1.041447

2010 | .9173497 .068323 -1.16 0.247 .7927542 1.061528

2010.25 | .9221385 .0832897 -0.90 0.369 .772527 1.100725

2010.5 | 1.155709 .0780973 2.14 0.032 1.012344 1.319376

2010.75 | .9084587 .0652922 -1.34 0.182 .7890929 1.045881

2011 | .9121014 .0601166 -1.40 0.163 .8015681 1.037877

2011.25 | .8627273 .0583934 -2.18 0.029 .7555448 .9851148

2011.5 | .9982713 .0613985 -0.03 0.978 .8849028 1.126164

2011.75 | .7709983 .0511258 -3.92 0.000 .6770321 .8780063

2012 | .8595988 .0610014 -2.13 0.033 .7479805 .9878735

2012.25 | .7536514 .0494805 -4.31 0.000 .6626518 .8571477

2012.5 | .881478 .0659884 -1.69 0.092 .7611839 1.020783

2012.75 | .6800307 .0537213 -4.88 0.000 .5824854 .7939113

2013 | .7666098 .0571774 -3.56 0.000 .6623502 .8872808

2013.25 | .7357101 .0583471 -3.87 0.000 .6297966 .8594351

2013.5 | .8572647 .068697 -1.92 0.055 .7326622 1.003058

2013.75 | .6359226 .05385 -5.35 0.000 .538672 .7507305

2014 | .7301261 .0579678 -3.96 0.000 .6249098 .8530577

2014.25 | .7615855 .0641145 -3.24 0.001 .6457431 .8982093

2014.5 | .8134188 .0647454 -2.59 0.009 .6959234 .9507515

2014.75 | .7861736 .0629258 -3.01 0.003 .6720287 .9197063

2015 | .7055091 .0576043 -4.27 0.000 .6011774 .8279471

2015.25 | .6626165 .0540616 -5.04 0.000 .5646955 .7775175

2015.5 | .8843886 .0738851 -1.47 0.141 .7508109 1.041731

2015.75 | .6936125 .0667608 -3.80 0.000 .5743651 .8376175

2016 | .7316475 .0717192 -3.19 0.001 .6037589 .8866256

|

\_cons | .000053 3.60e-06 -144.78 0.000 .0000464 .0000606

ln(hours) | 1 (exposure)

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

/lnalpha | -1.056131 .071466 -1.196202 -.9160606

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

alpha | .3477987 .0248558 .3023403 .4000921

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

(est1 stored)

. esttab using `"`directory'Model.`injury\_label'.`time\_label'.`violation\_level\_label'.C.PP.3.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.PP.3.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.PP.3.csv)

. est store nbin

.

. pause "next"

.

. // test for over-dispersion

. lrtest pois nbin, stats force

Likelihood-ratio test LR chi2(0) = -6164.17

(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 | 22,446 -40040.04 -38719.07 79 77596.15 78229.64

pois | 22,446 -45450.16 -41801.16 79 83760.32 84393.81

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

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

.

. pause "next"

.

. // final model + diagnostics/assessment

. quietly nbreg dv `pp\_lag\_4\_vars' `covariates' ib(freq).state ib(freq).time, vce(cl mineid) exposure(hours) iter(50) irr

. predict cpp3\_yhat

(option n assumed; predicted number of events)

(7,843 missing values generated)

. gen cpp3\_res = dv - cpp3\_yhat

(7,843 missing values generated)

.

. summ dv cpp3\_yhat

Variable | Obs Mean Std. Dev. Min Max

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

dv | 30,289 2.177721 3.851734 0 71

cpp3\_yhat | 22,446 2.733189 3.835915 .0000996 38.16259

. /\*

> pause "next"

>

> scatter dv cpp3\_yhat

>

> pause "next"

>

> scatter cpp3\_res dv

>

> pause "next"

>

> scatter cpp3\_res cpp3\_yhat

> \*/

. pause "complete: C.PP.3"

.