. // Model C.PP.1

.

. // poisson model

. glm dv `pp\_vars' `covariates' ib(freq).state ib(freq).time, family(poisson) link(log) vce(cl mineid) exposure(hours) iter(50) eform

Iteration 0: log pseudolikelihood = -53577.145

Iteration 1: log pseudolikelihood = -49527.035

Iteration 2: log pseudolikelihood = -49503.834

Iteration 3: log pseudolikelihood = -49503.821

Iteration 4: log pseudolikelihood = -49503.821

Generalized linear models No. of obs = 28,337

Optimization : ML Residual df = 28,255

Scale parameter = 1

Deviance = 51367.2379 (1/df) Deviance = 1.817988

Pearson = 1177620.101 (1/df) Pearson = 41.67829

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

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

AIC = 3.499723

Log pseudolikelihood = -49503.82142 BIC = -238300.9

(Std. Err. adjusted for 1,544 clusters in mineid)

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

| Robust

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

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

p48\_pp | 1.000049 .0001869 0.26 0.794 .9996826 1.000415

p75\_pp | 1.000023 7.32e-06 3.09 0.002 1.000008 1.000037

mine\_time | 1.000782 .001489 0.53 0.599 .9978679 1.003705

onsite\_insp\_hours | .9993383 .0001661 -3.98 0.000 .9990128 .9996638

|

state |

AL | .9885609 .0891112 -0.13 0.898 .8284649 1.179595

AR | 1.77163 .0916627 11.05 0.000 1.600784 1.960711

CO | .6723077 .0694712 -3.84 0.000 .5490494 .8232369

IL | 1.261839 .1081669 2.71 0.007 1.066688 1.492693

IN | 1.094911 .1398229 0.71 0.478 .8524686 1.406305

MD | 1.116936 .1388784 0.89 0.374 .8753681 1.425166

MT | .5107095 .0233356 -14.71 0.000 .4669608 .5585569

NM | .6910608 .0294811 -8.66 0.000 .6356285 .7513271

OH | .9361404 .0593991 -1.04 0.298 .8266684 1.060109

OK | 1.753495 .3402635 2.89 0.004 1.198754 2.564952

PA | 1.055286 .1033327 0.55 0.583 .8710059 1.278554

TN | 1.53029 .1424105 4.57 0.000 1.275146 1.836486

UT | .4572163 .0691444 -5.17 0.000 .3399346 .6149617

VA | .8405212 .0633657 -2.30 0.021 .7250665 .9743601

WV | 1.039053 .0577762 0.69 0.491 .9317666 1.158694

WY | .7150742 .0353242 -6.79 0.000 .6490861 .7877708

|

time |

2000 | .9773143 .0541524 -0.41 0.679 .8767377 1.089429

2000.25 | 1.103321 .0600511 1.81 0.071 .9916831 1.227526

2000.5 | 1.260442 .0626715 4.66 0.000 1.143404 1.389461

2000.75 | .9217579 .0455959 -1.65 0.100 .836587 1.0156

2001 | .9105637 .0392897 -2.17 0.030 .8367236 .99092

2001.5 | 1.20144 .0654008 3.37 0.001 1.079857 1.336711

2001.75 | .9300005 .0521998 -1.29 0.196 .8331176 1.03815

2002 | .966227 .0513925 -0.65 0.518 .8705722 1.072392

2002.25 | .9578992 .052273 -0.79 0.431 .8607348 1.066032

2002.5 | 1.049853 .0653187 0.78 0.434 .9293281 1.186008

2002.75 | .9315575 .0524997 -1.26 0.208 .8341393 1.040353

2003 | .8183653 .0469099 -3.50 0.000 .7314003 .9156707

2003.25 | .8908633 .0531953 -1.94 0.053 .7924721 1.00147

2003.5 | .9885189 .0548008 -0.21 0.835 .8867407 1.101979

2003.75 | .7526614 .0393948 -5.43 0.000 .6792774 .8339733

2004 | .7703304 .0460185 -4.37 0.000 .6852158 .8660175

2004.25 | .8413627 .0479027 -3.03 0.002 .7525241 .9406891

2004.5 | .9277282 .0510718 -1.36 0.173 .8328404 1.033427

2004.75 | .7329111 .0446282 -5.10 0.000 .6504595 .8258142

2005 | .7139248 .0420775 -5.72 0.000 .6360395 .8013475

2005.25 | .8069818 .0483657 -3.58 0.000 .7175427 .9075692

2005.5 | .8755755 .0555827 -2.09 0.036 .77314 .9915829

2005.75 | .7293707 .0464613 -4.95 0.000 .6437635 .826362

2006 | .745318 .0479605 -4.57 0.000 .6570033 .845504

2006.25 | .7072105 .0445832 -5.50 0.000 .6250117 .8002196

2006.5 | .8666777 .0623827 -1.99 0.047 .7526428 .9979904

2006.75 | .6805086 .0463539 -5.65 0.000 .5954601 .7777044

2007 | .6979989 .0479353 -5.24 0.000 .6100961 .7985669

2007.25 | .685988 .0566759 -4.56 0.000 .5834328 .8065704

2007.5 | .7820158 .0540756 -3.56 0.000 .6828979 .8955201

2007.75 | .6904256 .0472304 -5.42 0.000 .6037932 .789488

2008 | .6543214 .0427048 -6.50 0.000 .5757538 .7436104

2008.25 | .6438175 .0445354 -6.37 0.000 .5621882 .7372992

2008.5 | .7492071 .0561696 -3.85 0.000 .6468231 .8677972

2008.75 | .5956833 .0450315 -6.85 0.000 .5136504 .6908173

2009 | .6064094 .0399837 -7.59 0.000 .5328951 .6900651

2009.25 | .5642146 .0437583 -7.38 0.000 .4846501 .656841

2009.5 | .6380904 .0480091 -5.97 0.000 .5506035 .7394784

2009.75 | .5561383 .0400688 -8.14 0.000 .4828978 .6404872

2010 | .5601635 .0532007 -6.10 0.000 .4650218 .674771

2010.25 | .5600518 .0480503 -6.76 0.000 .4733675 .66261

2010.5 | .6621394 .0450964 -6.05 0.000 .5793974 .7566976

2010.75 | .5410305 .0412662 -8.05 0.000 .4659053 .6282692

2011 | .5433059 .0404459 -8.20 0.000 .4695453 .6286535

2011.25 | .5170681 .0396403 -8.60 0.000 .4449299 .6009024

2011.5 | .5939629 .0424998 -7.28 0.000 .516242 .6833847

2011.75 | .4597595 .0345598 -10.34 0.000 .396777 .5327396

2012 | .5070421 .0381498 -9.03 0.000 .4375217 .5876089

2012.25 | .4485467 .0347656 -10.34 0.000 .3853305 .522134

2012.5 | .5116171 .0431218 -7.95 0.000 .4337118 .6035162

2012.75 | .4146439 .0347649 -10.50 0.000 .35181 .4887

2013 | .4588634 .0376143 -9.50 0.000 .3907582 .5388388

2013.25 | .4533653 .0402593 -8.91 0.000 .3809436 .5395552

2013.5 | .5212274 .0471479 -7.20 0.000 .4365474 .6223334

2013.75 | .391628 .034598 -10.61 0.000 .3293632 .4656637

2014 | .4484015 .0430203 -8.36 0.000 .3715365 .5411686

2014.25 | .4726968 .0489284 -7.24 0.000 .3859008 .5790148

2014.5 | .5056747 .0460709 -7.48 0.000 .4229802 .6045362

2014.75 | .4729339 .0445663 -7.95 0.000 .3931775 .5688691

2015 | .4448066 .0449442 -8.02 0.000 .3648916 .5422237

2015.25 | .412079 .0407912 -8.96 0.000 .3394072 .5003108

2015.5 | .5400356 .0523795 -6.35 0.000 .4465418 .6531045

2015.75 | .4140238 .0459113 -7.95 0.000 .3331464 .5145355

2016 | .4703733 .0524308 -6.77 0.000 .3780613 .5852252

|

\_cons | .0000929 4.88e-06 -176.62 0.000 .0000838 .000103

ln(hours) | 1 (exposure)

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

.

. quietly poisson dv `pp\_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 = 51367.24

Prob > chi2(28255) = 0.0000

Pearson goodness-of-fit = 1177620

Prob > chi2(28255) = 0.0000

.

. pause "next"

.

. // negative binomial model

. glm dv `pp\_vars' `covariates' ib(freq).state ib(freq).time, family(nbinomial) link(log) vce(cl mineid) exposure(hours) iter(50) eform

Iteration 0: log pseudolikelihood = -47708.361

Iteration 1: log pseudolikelihood = -47138.74

Iteration 2: log pseudolikelihood = -47134.342

Iteration 3: log pseudolikelihood = -47134.338

Generalized linear models No. of obs = 28,337

Optimization : ML Residual df = 28,254

Scale parameter = 1

Deviance = 22394.10727 (1/df) Deviance = .7925995

Pearson = 922754.6001 (1/df) Pearson = 32.65926

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

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

AIC = 3.332557

Log pseudolikelihood = -47134.33808 BIC = -267263.7

(Std. Err. adjusted for 1,544 clusters in mineid)

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

| Robust

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

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

p48\_pp | 1.000061 .0003117 0.20 0.844 .9994507 1.000673

p75\_pp | 1.000028 7.98e-06 3.54 0.000 1.000013 1.000044

mine\_time | 1.001502 .0013413 1.12 0.262 .9988766 1.004134

onsite\_insp\_hours | .9993707 .0001535 -4.10 0.000 .9990698 .9996717

|

state |

AL | 1.054669 .1106122 0.51 0.612 .8587033 1.295355

AR | 1.649758 .0730092 11.31 0.000 1.512693 1.799243

CO | .818833 .1059498 -1.54 0.122 .6354148 1.055197

IL | 1.319586 .0832459 4.40 0.000 1.16611 1.49326

IN | 1.100025 .1034656 1.01 0.311 .9148302 1.322709

MD | 1.295458 .239468 1.40 0.161 .9017312 1.8611

MT | .5543072 .0207384 -15.77 0.000 .5151151 .5964811

NM | .7495187 .0287275 -7.52 0.000 .6952767 .8079924

OH | .9818336 .0792313 -0.23 0.820 .8382012 1.150079

OK | 1.877251 .3235711 3.65 0.000 1.339077 2.631716

PA | 1.355781 .0983992 4.19 0.000 1.176012 1.563032

TN | 1.74583 .1659624 5.86 0.000 1.449055 2.103386

UT | .535252 .0961937 -3.48 0.001 .3763424 .7612606

VA | .9364711 .0468966 -1.31 0.190 .8489223 1.033049

WV | 1.287132 .0604707 5.37 0.000 1.173905 1.411281

WY | .7960107 .0456437 -3.98 0.000 .7113945 .8906915

|

time |

2000 | .8937561 .0819169 -1.23 0.220 .7467968 1.069635

2000.25 | 1.058073 .0969655 0.62 0.538 .8841147 1.26626

2000.5 | 1.172741 .1033897 1.81 0.071 .9866424 1.393942

2000.75 | .7825407 .0669311 -2.87 0.004 .6617643 .9253597

2001 | .7968668 .0632676 -2.86 0.004 .6820311 .9310378

2001.5 | 1.082618 .0785241 1.09 0.274 .9391526 1.247999

2001.75 | .8537468 .0633293 -2.13 0.033 .7382248 .9873464

2002 | .9629253 .1118426 -0.33 0.745 .7668786 1.20909

2002.25 | .9030557 .0705191 -1.31 0.192 .7748983 1.052408

2002.5 | .9736293 .072476 -0.36 0.720 .8414553 1.126565

2002.75 | .7698334 .0705552 -2.85 0.004 .6432564 .9213176

2003 | .7566584 .0739421 -2.85 0.004 .624768 .9163913

2003.25 | .8393424 .0902773 -1.63 0.103 .679808 1.036316

2003.5 | .9346918 .0883996 -0.71 0.475 .7765421 1.12505

2003.75 | .6486882 .0595861 -4.71 0.000 .5418109 .7766479

2004 | .6987463 .0674102 -3.72 0.000 .5783644 .8441848

2004.25 | .7399558 .0715076 -3.12 0.002 .6122765 .8942603

2004.5 | .7956009 .0728765 -2.50 0.013 .6648533 .9520609

2004.75 | .6302761 .0540941 -5.38 0.000 .5326913 .7457378

2005 | .64452 .060439 -4.68 0.000 .5363102 .7745629

2005.25 | .689653 .0645332 -3.97 0.000 .574091 .828477

2005.5 | .7418045 .067009 -3.31 0.001 .6214388 .8854836

2005.75 | .608015 .0598217 -5.06 0.000 .5013787 .7373313

2006 | .6906771 .0705773 -3.62 0.000 .5653202 .8438314

2006.25 | .6472344 .0639867 -4.40 0.000 .5332248 .7856206

2006.5 | .735349 .0716252 -3.16 0.002 .6075527 .8900267

2006.75 | .6110554 .0617459 -4.87 0.000 .5012662 .7448912

2007 | .5871171 .0587227 -5.32 0.000 .4826015 .7142673

2007.25 | .611268 .0627847 -4.79 0.000 .4998076 .7475848

2007.5 | .7260362 .0802848 -2.90 0.004 .5845649 .9017451

2007.75 | .5758374 .0589606 -5.39 0.000 .471134 .7038097

2008 | .5595383 .0550841 -5.90 0.000 .4613523 .6786203

2008.25 | .5628461 .0577811 -5.60 0.000 .4602633 .6882924

2008.5 | .5923243 .060907 -5.09 0.000 .484209 .7245796

2008.75 | .4879114 .0499758 -7.01 0.000 .3991666 .5963865

2009 | .5024496 .0504102 -6.86 0.000 .412755 .6116354

2009.25 | .5127383 .0557004 -6.15 0.000 .4144069 .634402

2009.5 | .5564788 .0585019 -5.58 0.000 .4528589 .6838083

2009.75 | .4727859 .0495772 -7.14 0.000 .3849515 .5806616

2010 | .4698122 .0497317 -7.14 0.000 .3817867 .578133

2010.25 | .473695 .0568821 -6.22 0.000 .3743563 .5993941

2010.5 | .6030036 .0613489 -4.97 0.000 .4939916 .7360718

2010.75 | .4801406 .0519328 -6.78 0.000 .3884195 .5935206

2011 | .4753352 .0500194 -7.07 0.000 .3867482 .5842136

2011.25 | .4546982 .0471257 -7.60 0.000 .3711105 .5571128

2011.5 | .5142966 .0513266 -6.66 0.000 .4229256 .6254077

2011.75 | .4027809 .0415085 -8.82 0.000 .3291155 .4929346

2012 | .4483624 .0483254 -7.44 0.000 .3629819 .5538261

2012.25 | .3856619 .0401468 -9.15 0.000 .3144836 .4729501

2012.5 | .4479109 .0506087 -7.11 0.000 .3589351 .5589429

2012.75 | .3387286 .0386366 -9.49 0.000 .2708699 .4235874

2013 | .4024811 .0463414 -7.90 0.000 .3211728 .5043735

2013.25 | .3746849 .0413538 -8.89 0.000 .3018001 .4651713

2013.5 | .4432817 .049857 -7.23 0.000 .3555847 .5526074

2013.75 | .3262884 .0371359 -9.84 0.000 .2610501 .4078303

2014 | .3663674 .0416058 -8.84 0.000 .2932594 .457701

2014.25 | .3834563 .0447085 -8.22 0.000 .3051204 .481904

2014.5 | .4035598 .0462527 -7.92 0.000 .3223667 .5052026

2014.75 | .4079116 .0478624 -7.64 0.000 .3241083 .5133834

2015 | .3602643 .041442 -8.88 0.000 .2875448 .4513743

2015.25 | .3433535 .0394007 -9.32 0.000 .2741978 .4299511

2015.5 | .4439781 .0511709 -7.05 0.000 .354206 .5565025

2015.75 | .3624743 .0451198 -8.15 0.000 .2840024 .4626284

2016 | .3760739 .0485368 -7.58 0.000 .292022 .4843183

|

\_cons | .0000966 7.71e-06 -115.77 0.000 .0000826 .0001129

ln(hours) | 1 (exposure)

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

.

. pause "next"

.

. eststo clear

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

Fitting Poisson model:

Iteration 0: log pseudolikelihood = -50349.366

Iteration 1: log pseudolikelihood = -49506.945

Iteration 2: log pseudolikelihood = -49503.823

Iteration 3: log pseudolikelihood = -49503.821

Fitting constant-only model:

Iteration 0: log pseudolikelihood = -48337.833

Iteration 1: log pseudolikelihood = -47621.385

Iteration 2: log pseudolikelihood = -47591.372

Iteration 3: log pseudolikelihood = -47591.309

Iteration 4: log pseudolikelihood = -47591.309

Fitting full model:

Iteration 0: log pseudolikelihood = -46206.816

Iteration 1: log pseudolikelihood = -45978.094

Iteration 2: log pseudolikelihood = -45973.675

Iteration 3: log pseudolikelihood = -45973.673

Negative binomial regression Number of obs = 28,337

Wald chi2(82) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -45973.673 Pseudo R2 = 0.0340

(Std. Err. adjusted for 1,544 clusters in mineid)

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

| Robust

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

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

p48\_pp | 1.000011 .0002709 0.04 0.968 .9994801 1.000542

p75\_pp | 1.000028 7.45e-06 3.82 0.000 1.000014 1.000043

mine\_time | 1.00113 .0013095 0.86 0.388 .9985669 1.0037

onsite\_insp\_hours | .9993553 .0001501 -4.29 0.000 .9990611 .9996496

|

state |

AL | 1.04483 .1012769 0.45 0.651 .8640473 1.263438

AR | 1.735184 .0753494 12.69 0.000 1.593612 1.889333

CO | .7656703 .0938114 -2.18 0.029 .6022141 .9734925

IL | 1.289711 .0801941 4.09 0.000 1.141733 1.456867

IN | 1.100341 .1112194 0.95 0.344 .9025897 1.341419

MD | 1.232008 .1892716 1.36 0.174 .9116843 1.664878

MT | .5460664 .0210843 -15.67 0.000 .5062669 .5889948

NM | .7468512 .0281036 -7.76 0.000 .6937513 .8040154

OH | .97999 .0712511 -0.28 0.781 .8498341 1.13008

OK | 1.849483 .3237581 3.51 0.000 1.312335 2.606489

PA | 1.309033 .0991779 3.55 0.000 1.128392 1.518592

TN | 1.678379 .1543832 5.63 0.000 1.401501 2.009956

UT | .5065836 .0850613 -4.05 0.000 .3645226 .7040083

VA | .9189088 .04824 -1.61 0.107 .8290618 1.018493

WV | 1.219286 .0573302 4.22 0.000 1.111943 1.336991

WY | .7806581 .0403666 -4.79 0.000 .7054182 .8639232

|

time |

2000 | .9328171 .067001 -0.97 0.333 .810322 1.07383

2000.25 | 1.082344 .0778177 1.10 0.271 .9400826 1.246133

2000.5 | 1.202974 .0812397 2.74 0.006 1.053835 1.37322

2000.75 | .8377682 .0569135 -2.61 0.009 .7333271 .9570838

2001 | .8365123 .05205 -2.87 0.004 .7404715 .9450097

2001.5 | 1.11756 .069176 1.80 0.073 .989879 1.26171

2001.75 | .8808399 .0556153 -2.01 0.044 .7783107 .9968755

2002 | .952869 .0753723 -0.61 0.542 .8160238 1.112663

2002.25 | .9241889 .0611776 -1.19 0.234 .8117357 1.052221

2002.5 | 1.004163 .0665249 0.06 0.950 .8818869 1.143393

2002.75 | .8247138 .0598426 -2.66 0.008 .7153831 .9507533

2003 | .7793832 .05998 -3.24 0.001 .6702611 .9062709

2003.25 | .8433914 .0684868 -2.10 0.036 .7192969 .988895

2003.5 | .9559923 .0702122 -0.61 0.540 .8278248 1.104003

2003.75 | .6876809 .0493706 -5.22 0.000 .5974159 .7915842

2004 | .7329861 .0572045 -3.98 0.000 .6290213 .8541344

2004.25 | .7809862 .0603772 -3.20 0.001 .6711784 .9087592

2004.5 | .8532504 .0621473 -2.18 0.029 .7397389 .9841801

2004.75 | .6772704 .0468209 -5.64 0.000 .5914486 .7755453

2005 | .6718295 .0494523 -5.40 0.000 .581572 .7760947

2005.25 | .7313458 .0550592 -4.16 0.000 .6310159 .8476279

2005.5 | .7900753 .0587296 -3.17 0.002 .6829598 .9139907

2005.75 | .6542797 .0529198 -5.24 0.000 .5583623 .766674

2006 | .7118081 .0584145 -4.14 0.000 .6060509 .8360203

2006.25 | .681072 .0551336 -4.74 0.000 .5811487 .7981763

2006.5 | .7881131 .0637172 -2.95 0.003 .6726216 .9234348

2006.75 | .6385367 .0528012 -5.42 0.000 .5429993 .7508834

2007 | .6310736 .0523102 -5.55 0.000 .5364425 .7423981

2007.25 | .6438258 .057029 -4.97 0.000 .5412156 .7658901

2007.5 | .7532036 .0664035 -3.21 0.001 .633679 .895273

2007.75 | .614723 .0513357 -5.83 0.000 .5219097 .7240416

2008 | .5897469 .0470226 -6.62 0.000 .5044247 .689501

2008.25 | .5876998 .0497813 -6.28 0.000 .4977994 .693836

2008.5 | .6413295 .0556038 -5.12 0.000 .5411048 .7601181

2008.75 | .5243237 .0451116 -7.50 0.000 .4429595 .6206332

2009 | .5302631 .0431707 -7.79 0.000 .4520556 .6220008

2009.25 | .5247481 .0467628 -7.24 0.000 .4406525 .6248929

2009.5 | .5840036 .0507732 -6.19 0.000 .4925068 .6924986

2009.75 | .4993707 .0434897 -7.97 0.000 .4210103 .5923158

2010 | .4962763 .0455193 -7.64 0.000 .4146197 .5940146

2010.25 | .5024424 .0520652 -6.64 0.000 .410092 .6155897

2010.5 | .6242462 .0524107 -5.61 0.000 .5295298 .7359045

2010.75 | .5001577 .0446124 -7.77 0.000 .4199356 .5957051

2011 | .4971283 .0432605 -8.03 0.000 .4191759 .5895772

2011.25 | .473004 .0407798 -8.68 0.000 .3994652 .5600808

2011.5 | .5437313 .0446648 -7.42 0.000 .4628736 .6387137

2011.75 | .4216489 .0360204 -10.11 0.000 .3566441 .498502

2012 | .4665544 .0413307 -8.61 0.000 .3921904 .5550188

2012.25 | .4034059 .0348062 -10.52 0.000 .3406432 .4777324

2012.5 | .4641982 .0436722 -8.16 0.000 .3860305 .5581941

2012.75 | .3624773 .0351032 -10.48 0.000 .2998115 .4382412

2013 | .4158124 .0391183 -9.33 0.000 .3457954 .5000065

2013.25 | .3968114 .0371581 -9.87 0.000 .3302754 .4767515

2013.5 | .4612445 .0441223 -8.09 0.000 .3823895 .5563608

2013.75 | .3457083 .0338048 -10.86 0.000 .2854142 .4187395

2014 | .3880975 .0383257 -9.58 0.000 .3198029 .4709766

2014.25 | .4062717 .041094 -8.90 0.000 .3332102 .4953532

2014.5 | .4305745 .042173 -8.60 0.000 .3553667 .5216989

2014.75 | .4230334 .0421852 -8.63 0.000 .3479303 .5143479

2015 | .383137 .0384757 -9.55 0.000 .3146835 .4664811

2015.25 | .3632846 .0363886 -10.11 0.000 .2985286 .4420872

2015.5 | .4733689 .0472486 -7.49 0.000 .3892587 .5756533

2015.75 | .3780134 .0417874 -8.80 0.000 .3043767 .4694649

2016 | .406058 .046927 -7.80 0.000 .3237554 .509283

|

\_cons | .000094 5.96e-06 -146.42 0.000 .0000831 .0001065

ln(hours) | 1 (exposure)

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

/lnalpha | -1.008514 .0666595 -1.139164 -.8778642

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

alpha | .3647605 .0243147 .3200864 .4156698

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

(est1 stored)

. esttab using `"`directory'Model.`injury\_label'.`time\_label'.`violation\_level\_label'.C.PP.1.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.1.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.1.csv)

. est store nbin

.

. pause "next"

.

. // test for over-dispersion

. lrtest pois nbin, stats force

Likelihood-ratio test LR chi2(2) = 7060.30

(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 | 28,337 -53929.83 -49503.82 82 99171.64 99848.3

nbin | 28,337 -47591.31 -45973.67 84 92115.35 92808.51

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

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

.

. pause "next"

.

. // final model + diagnostics/assessment

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

. predict cpp1\_yhat

(option n assumed; predicted number of events)

(1,952 missing values generated)

. gen cpp1\_res = dv - cpp1\_yhat

(1,952 missing values generated)

.

. summ dv cpp1\_yhat

Variable | Obs Mean Std. Dev. Min Max

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

dv | 30,289 2.177721 3.851734 0 71

cpp1\_yhat | 28,337 2.43161 3.65786 .0000983 45.22606

. /\*

> pause "next"

>

> scatter dv cpp1\_yhat

>

> pause "next"

>

> scatter cpp1\_res dv

>

> pause "next"

>

> scatter cpp1\_res cpp1\_yhat

> \*/

. pause "complete: C.PP.1"