. // Model C.V.3

.

. // poisson model

. glm dv `count\_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 = -44878.656

Iteration 1: log pseudolikelihood = -41829.754

Iteration 2: log pseudolikelihood = -41816.811

Iteration 3: log pseudolikelihood = -41816.807

Iteration 4: log pseudolikelihood = -41816.807

Generalized linear models No. of obs = 22,446

Optimization : ML Residual df = 22,368

Scale parameter = 1

Deviance = 42549.78201 (1/df) Deviance = 1.902261

Pearson = 1107053.314 (1/df) Pearson = 49.49273

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

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

AIC = 3.732942

Log pseudolikelihood = -41816.80665 BIC = -181552.3

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

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

| Robust

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

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

p48\_c\_4lag | 1.002471 .0053137 0.47 0.642 .9921098 1.01294

p75\_c\_4lag | 1.00018 .0001696 1.06 0.290 .9998472 1.000512

mine\_time | 1.000654 .0016759 0.39 0.696 .9973747 1.003944

onsite\_insp\_hours | .9994341 .0001278 -4.43 0.000 .9991837 .9996847

|

state |

AL | .9557561 .0817733 -0.53 0.597 .808201 1.130251

AR | 1.83909 .1039629 10.78 0.000 1.646209 2.05457

CO | .6568634 .0685805 -4.03 0.000 .5353088 .8060198

IL | 1.275666 .1002968 3.10 0.002 1.093485 1.488199

IN | 1.086577 .1310552 0.69 0.491 .8578171 1.376342

MD | 1.138834 .1412198 1.05 0.294 .8931168 1.452154

MT | .5110083 .0259144 -13.24 0.000 .4626596 .5644095

NM | .6805641 .0309948 -8.45 0.000 .6224477 .7441065

OH | .9055473 .0587973 -1.53 0.127 .797338 1.028442

OK | 1.522147 .2812281 2.27 0.023 1.059719 2.186364

PA | 1.000643 .1016987 0.01 0.995 .8199152 1.221208

TN | 1.497032 .1756679 3.44 0.001 1.189454 1.884146

UT | .4358605 .0686471 -5.27 0.000 .3200995 .5934852

VA | .8233138 .0679248 -2.36 0.018 .7003898 .9678119

WV | 1.025759 .0572949 0.46 0.649 .9193917 1.144433

WY | .687342 .0304355 -8.47 0.000 .6302047 .7496597

|

time |

2000.75 | 1.430659 .1101178 4.65 0.000 1.230323 1.663616

2001 | 1.420524 .1117438 4.46 0.000 1.217559 1.657324

2001.25 | 1.499367 .1206656 5.03 0.000 1.280576 1.75554

2001.5 | 1.84977 .1572066 7.24 0.000 1.565946 2.185038

2001.75 | 1.453057 .1219342 4.45 0.000 1.232689 1.712821

2002 | 1.513928 .1059952 5.92 0.000 1.319805 1.736604

2002.25 | 1.508151 .1132346 5.47 0.000 1.301773 1.747248

2002.5 | 1.619465 .1341878 5.82 0.000 1.376707 1.905028

2002.75 | 1.459456 .1117269 4.94 0.000 1.256111 1.695718

2003 | 1.261314 .0886518 3.30 0.001 1.098996 1.447605

2003.25 | 1.38603 .1148541 3.94 0.000 1.17825 1.630452

2003.5 | 1.504108 .10336 5.94 0.000 1.314576 1.720966

2003.75 | 1.186442 .090014 2.25 0.024 1.022508 1.376658

2004 | 1.197082 .0866254 2.49 0.013 1.03879 1.379495

2004.25 | 1.307904 .0863297 4.07 0.000 1.149188 1.488539

2004.5 | 1.444655 .1017522 5.22 0.000 1.258378 1.658507

2004.75 | 1.155264 .0905484 1.84 0.066 .9907517 1.347092

2005 | 1.106995 .077453 1.45 0.146 .9651388 1.269702

2005.25 | 1.241287 .0871086 3.08 0.002 1.081778 1.424315

2005.5 | 1.353665 .1083585 3.78 0.000 1.157108 1.583611

2005.75 | 1.135233 .083176 1.73 0.083 .9833753 1.310541

2006 | 1.134761 .0755807 1.90 0.058 .9958877 1.293001

2006.25 | 1.089958 .0746402 1.26 0.208 .9530587 1.246522

2006.5 | 1.361772 .082435 5.10 0.000 1.20942 1.533318

2006.75 | 1.034902 .0663839 0.53 0.593 .9126382 1.173545

2007 | 1.067468 .0681142 1.02 0.306 .941977 1.209676

2007.25 | 1.097757 .0862974 1.19 0.235 .9410028 1.280623

2007.5 | 1.292845 .077502 4.28 0.000 1.149529 1.45403

2007.75 | 1.17452 .0704426 2.68 0.007 1.044261 1.321027

2008 | 1.072621 .0633986 1.19 0.236 .9552889 1.204363

2008.25 | 1.056322 .0705548 0.82 0.412 .9267059 1.204066

2008.5 | 1.26304 .0702074 4.20 0.000 1.132666 1.408419

2009 | .990764 .0506074 -0.18 0.856 .8963788 1.095088

2009.25 | .9227424 .0524677 -1.41 0.157 .8254307 1.031526

2009.5 | 1.05818 .0528632 1.13 0.258 .9594811 1.167032

2009.75 | .9128044 .0535532 -1.56 0.120 .8136521 1.02404

2010 | .920289 .0672784 -1.14 0.256 .7974372 1.062067

2010.25 | .9135967 .0654748 -1.26 0.207 .7938737 1.051375

2010.5 | 1.081744 .0646504 1.31 0.189 .9621719 1.216177

2010.75 | .8705681 .0504371 -2.39 0.017 .7771192 .9752543

2011 | .8861219 .0529305 -2.02 0.043 .7882225 .9961807

2011.25 | .834673 .0492724 -3.06 0.002 .7434782 .9370537

2011.5 | .968184 .0531657 -0.59 0.556 .8693927 1.078201

2011.75 | .7481608 .0433324 -5.01 0.000 .6678741 .838099

2012 | .8265158 .0516477 -3.05 0.002 .7312416 .9342033

2012.25 | .7343848 .0428267 -5.29 0.000 .6550655 .8233087

2012.5 | .8468524 .0566845 -2.48 0.013 .742732 .965569

2012.75 | .6773147 .0511473 -5.16 0.000 .5841336 .78536

2013 | .7422533 .054458 -4.06 0.000 .6428368 .8570448

2013.25 | .7337951 .0597066 -3.80 0.000 .6256266 .8606655

2013.5 | .847489 .0713173 -1.97 0.049 .7186284 .9994562

2013.75 | .6377301 .0532197 -5.39 0.000 .5415051 .7510541

2014 | .7350489 .0587817 -3.85 0.000 .6284139 .8597787

2014.25 | .7700337 .0700416 -2.87 0.004 .6442956 .9203102

2014.5 | .8365417 .0632208 -2.36 0.018 .7213714 .9700995

2014.75 | .770393 .0588595 -3.41 0.001 .6632525 .8948409

2015 | .718533 .0591692 -4.01 0.000 .6114383 .8443857

2015.25 | .6600389 .049547 -5.53 0.000 .5697346 .7646566

2015.5 | .8801506 .0737224 -1.52 0.127 .7468947 1.037181

2015.75 | .6644667 .0639348 -4.25 0.000 .5502638 .8023716

2016 | .7388288 .0713913 -3.13 0.002 .611356 .8928807

|

\_cons | .0000592 4.29e-06 -134.18 0.000 .0000513 .0000682

ln(hours) | 1 (exposure)

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

.

. quietly poisson dv `count\_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 = 42549.78

Prob > chi2(22368) = 0.0000

Pearson goodness-of-fit = 1107053

Prob > chi2(22368) = 0.0000

.

. pause "next"

.

. // negative binomial model

. glm dv `count\_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 = -40205.038

Iteration 1: log pseudolikelihood = -39831.924

Iteration 2: log pseudolikelihood = -39829.458

Iteration 3: log pseudolikelihood = -39829.457

Generalized linear models No. of obs = 22,446

Optimization : ML Residual df = 22,368

Scale parameter = 1

Deviance = 17480.35817 (1/df) Deviance = .7814895

Pearson = 803481.4391 (1/df) Pearson = 35.92102

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

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

AIC = 3.555864

Log pseudolikelihood = -39829.45662 BIC = -206621.7

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

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

| Robust

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

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

p48\_c\_4lag | 1.001132 .0060149 0.19 0.851 .9894124 1.012991

p75\_c\_4lag | 1.000636 .0001916 3.32 0.001 1.00026 1.001011

mine\_time | 1.000657 .0014575 0.45 0.652 .9978048 1.003518

onsite\_insp\_hours | .9992735 .0001356 -5.36 0.000 .9990078 .9995392

|

state |

AL | 1.02758 .1092978 0.26 0.798 .8342153 1.265765

AR | 1.790814 .0883135 11.82 0.000 1.625824 1.972546

CO | .783488 .1044702 -1.83 0.067 .6032998 1.017493

IL | 1.287332 .0786551 4.13 0.000 1.142044 1.451104

IN | 1.077556 .0966817 0.83 0.405 .9037895 1.284731

MD | 1.345701 .2529184 1.58 0.114 .9310417 1.945038

MT | .6014102 .0247508 -12.36 0.000 .5548045 .651931

NM | .7500048 .0307141 -7.02 0.000 .6921587 .8126853

OH | .9678473 .0923284 -0.34 0.732 .8027974 1.16683

OK | 1.651288 .2900225 2.86 0.004 1.170369 2.329823

PA | 1.371363 .1126728 3.84 0.000 1.167392 1.610973

TN | 1.738454 .2213801 4.34 0.000 1.354468 2.2313

UT | .532732 .1042378 -3.22 0.001 .3630423 .7817366

VA | .919154 .0488586 -1.59 0.113 .8282124 1.020081

WV | 1.278283 .0653595 4.80 0.000 1.15639 1.413024

WY | .7788074 .0287967 -6.76 0.000 .7243634 .8373434

|

time |

2000.75 | 1.45177 .1182102 4.58 0.000 1.237624 1.702969

2001 | 1.538789 .1275371 5.20 0.000 1.308067 1.810205

2001.25 | 1.78498 .2091521 4.94 0.000 1.418716 2.245803

2001.5 | 2.002808 .1821641 7.64 0.000 1.675787 2.393645

2001.75 | 1.630817 .1470101 5.43 0.000 1.366702 1.945974

2002 | 1.838841 .2429287 4.61 0.000 1.419359 2.382299

2002.25 | 1.735357 .1638476 5.84 0.000 1.442184 2.088127

2002.5 | 1.826005 .174421 6.30 0.000 1.51424 2.201959

2002.75 | 1.470459 .116592 4.86 0.000 1.258814 1.717688

2003 | 1.428444 .1202019 4.24 0.000 1.211255 1.684577

2003.25 | 1.615109 .1602699 4.83 0.000 1.329645 1.96186

2003.5 | 1.71881 .1388858 6.70 0.000 1.46706 2.013761

2003.75 | 1.269094 .1071463 2.82 0.005 1.075547 1.497472

2004 | 1.331618 .1126724 3.38 0.001 1.128124 1.571819

2004.25 | 1.380307 .1105292 4.03 0.000 1.179818 1.614865

2004.5 | 1.518752 .1174975 5.40 0.000 1.305071 1.76742

2004.75 | 1.230274 .1006757 2.53 0.011 1.047964 1.4443

2005 | 1.23478 .0977543 2.66 0.008 1.05731 1.442039

2005.25 | 1.309862 .0979365 3.61 0.000 1.131313 1.516592

2005.5 | 1.435136 .1079702 4.80 0.000 1.238381 1.663151

2005.75 | 1.166778 .0939639 1.92 0.055 .9964113 1.366274

2006 | 1.288171 .1014119 3.22 0.001 1.103982 1.503089

2006.25 | 1.235377 .0959913 2.72 0.007 1.060864 1.438599

2006.5 | 1.458215 .1053016 5.22 0.000 1.265767 1.679922

2006.75 | 1.138918 .089754 1.65 0.099 .9759161 1.329146

2007 | 1.087664 .077867 1.17 0.240 .9452708 1.251507

2007.25 | 1.148966 .0866802 1.84 0.066 .991039 1.332059

2007.5 | 1.445848 .1226318 4.35 0.000 1.224409 1.707334

2007.75 | 1.221501 .0885487 2.76 0.006 1.059714 1.407987

2008 | 1.100879 .0776253 1.36 0.173 .9587817 1.264037

2008.25 | 1.095888 .0784604 1.28 0.201 .9524108 1.26098

2008.5 | 1.202387 .0774534 2.86 0.004 1.059774 1.364193

2009 | .9824664 .0643786 -0.27 0.787 .8640534 1.117107

2009.25 | .9742721 .0743283 -0.34 0.733 .8389597 1.131408

2009.5 | 1.103017 .0745613 1.45 0.147 .9661466 1.259277

2009.75 | .9255733 .0665205 -1.08 0.282 .8039617 1.06558

2010 | .932571 .0727165 -0.90 0.371 .8004056 1.08656

2010.25 | .93259 .0905289 -0.72 0.472 .7710144 1.128026

2010.5 | 1.195981 .0878589 2.44 0.015 1.035604 1.381195

2010.75 | .9299333 .073859 -0.91 0.360 .795877 1.08657

2011 | .9267855 .0674798 -1.04 0.296 .8035311 1.068946

2011.25 | .8863672 .0649697 -1.65 0.100 .767753 1.023307

2011.5 | 1.006684 .0665885 0.10 0.920 .884279 1.146033

2011.75 | .7858059 .0572084 -3.31 0.001 .6813118 .9063264

2012 | .8845206 .0695712 -1.56 0.119 .7581541 1.031949

2012.25 | .7794245 .0566347 -3.43 0.001 .6759645 .8987198

2012.5 | .9234036 .0785556 -0.94 0.349 .7815887 1.09095

2012.75 | .6898256 .0594442 -4.31 0.000 .5826247 .816751

2013 | .8004639 .0688518 -2.59 0.010 .6762788 .9474531

2013.25 | .7507359 .0633781 -3.40 0.001 .6362498 .8858226

2013.5 | .8892789 .0764709 -1.36 0.172 .7513485 1.05253

2013.75 | .6391564 .058167 -4.92 0.000 .5347401 .7639617

2014 | .7470837 .0628974 -3.46 0.001 .633441 .8811145

2014.25 | .7809887 .0687402 -2.81 0.005 .6572409 .9280361

2014.5 | .8242122 .0715722 -2.23 0.026 .6952215 .9771357

2014.75 | .820638 .0729118 -2.22 0.026 .6894843 .9767399

2015 | .7125654 .0606939 -3.98 0.000 .603007 .8420292

2015.25 | .6746124 .0581996 -4.56 0.000 .5696659 .7988927

2015.5 | .8939457 .0797773 -1.26 0.209 .7504961 1.064814

2015.75 | .7190982 .0717245 -3.31 0.001 .5914083 .8743575

2016 | .7317267 .0744254 -3.07 0.002 .5994756 .8931539

|

\_cons | .0000508 3.59e-06 -139.97 0.000 .0000443 .0000584

ln(hours) | 1 (exposure)

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

.

. pause "next"

.

. eststo clear

. eststo: nbreg dv `count\_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 = -43360.398

Iteration 1: log pseudolikelihood = -41831.301

Iteration 2: log pseudolikelihood = -41816.812

Iteration 3: log pseudolikelihood = -41816.807

Iteration 4: log pseudolikelihood = -41816.807

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 = -38921.182

Iteration 1: log pseudolikelihood = -38720.792

Iteration 2: log pseudolikelihood = -38716.248

Iteration 3: log pseudolikelihood = -38716.246

Negative binomial regression Number of obs = 22,446

Wald chi2(77) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -38716.246 Pseudo R2 = 0.0331

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

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

| Robust

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

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

p48\_c\_4lag | 1.000343 .0049536 0.07 0.945 .9906811 1.010099

p75\_c\_4lag | 1.000481 .0001748 2.76 0.006 1.000139 1.000824

mine\_time | 1.000461 .0014253 0.32 0.746 .9976717 1.003259

onsite\_insp\_hours | .999333 .0001319 -5.06 0.000 .9990746 .9995915

|

state |

AL | 1.015516 .0975313 0.16 0.873 .8412724 1.22585

AR | 1.852058 .0885132 12.90 0.000 1.686453 2.033926

CO | .7363039 .0912689 -2.47 0.014 .5774919 .9387895

IL | 1.270858 .0764383 3.99 0.000 1.129536 1.429863

IN | 1.082385 .103886 0.82 0.409 .8967767 1.306408

MD | 1.261534 .1939346 1.51 0.131 .9333499 1.705114

MT | .5704428 .024362 -13.14 0.000 .5246379 .6202467

NM | .7392952 .029638 -7.53 0.000 .6834293 .7997277

OH | .9560151 .0787649 -0.55 0.585 .8134582 1.123555

OK | 1.61378 .2804894 2.75 0.006 1.147884 2.268772

PA | 1.290286 .1116598 2.95 0.003 1.08899 1.528791

TN | 1.653563 .1983849 4.19 0.000 1.307069 2.09191

UT | .4936277 .0885419 -3.94 0.000 .3473118 .7015836

VA | .9018454 .050913 -1.83 0.067 .8073803 1.007363

WV | 1.204093 .0605385 3.69 0.000 1.091099 1.32879

WY | .7571116 .0284091 -7.42 0.000 .703429 .8148911

|

time |

2000.75 | 1.454745 .1127194 4.84 0.000 1.249777 1.69333

2001 | 1.490832 .1147469 5.19 0.000 1.282074 1.733582

2001.25 | 1.663915 .1564278 5.42 0.000 1.383911 2.000572

2001.5 | 1.929049 .1588514 7.98 0.000 1.641532 2.266925

2001.75 | 1.554428 .128233 5.35 0.000 1.322363 1.82722

2002 | 1.685514 .1578546 5.57 0.000 1.402859 2.025119

2002.25 | 1.648134 .1371911 6.00 0.000 1.400033 1.940201

2002.5 | 1.742294 .1466344 6.60 0.000 1.477349 2.054755

2002.75 | 1.463993 .1085036 5.14 0.000 1.266055 1.692878

2003 | 1.354269 .1019998 4.03 0.000 1.168408 1.569694

2003.25 | 1.494522 .1223617 4.91 0.000 1.27295 1.75466

2003.5 | 1.628604 .1196197 6.64 0.000 1.410247 1.880769

2003.75 | 1.238987 .0974666 2.72 0.006 1.061954 1.445532

2004 | 1.295802 .1030361 3.26 0.001 1.108805 1.514336

2004.25 | 1.36327 .0990209 4.27 0.000 1.182375 1.571842

2004.5 | 1.507618 .1097177 5.64 0.000 1.307208 1.738754

2004.75 | 1.222213 .0964213 2.54 0.011 1.047116 1.426589

2005 | 1.188355 .0870935 2.35 0.019 1.029349 1.371924

2005.25 | 1.284511 .0891685 3.61 0.000 1.121112 1.471726

2005.5 | 1.405057 .0993242 4.81 0.000 1.223269 1.61386

2005.75 | 1.166206 .0897184 2.00 0.046 1.002977 1.356001

2006 | 1.232327 .0889549 2.89 0.004 1.06975 1.419612

2006.25 | 1.198024 .088017 2.46 0.014 1.037359 1.383573

2006.5 | 1.435056 .096298 5.38 0.000 1.258201 1.636771

2006.75 | 1.102674 .0792789 1.36 0.174 .9577416 1.269539

2007 | 1.090219 .074038 1.27 0.203 .95435 1.245431

2007.25 | 1.141305 .0876117 1.72 0.085 .981883 1.326612

2007.5 | 1.390464 .1001913 4.57 0.000 1.207329 1.601379

2007.75 | 1.201547 .0778741 2.83 0.005 1.058213 1.364296

2008 | 1.086799 .068843 1.31 0.189 .9599088 1.230462

2008.25 | 1.074171 .072424 1.06 0.289 .941202 1.225926

2008.5 | 1.219872 .0726918 3.34 0.001 1.085404 1.370999

2009 | .970846 .0555261 -0.52 0.605 .8678949 1.086009

2009.25 | .9473195 .0642832 -0.80 0.425 .8293457 1.082075

2009.5 | 1.083287 .0654777 1.32 0.186 .9622628 1.219532

2009.75 | .9161578 .060387 -1.33 0.184 .8051277 1.042499

2010 | .9187723 .0681003 -1.14 0.253 .7945405 1.062429

2010.25 | .9233219 .0834098 -0.88 0.377 .7734967 1.102168

2010.5 | 1.153813 .077889 2.12 0.034 1.010821 1.317032

2010.75 | .9064817 .0649858 -1.37 0.171 .7876555 1.043234

2011 | .910611 .0599135 -1.42 0.155 .8004389 1.035947

2011.25 | .8619027 .0581967 -2.20 0.028 .7550645 .9838579

2011.5 | .9974452 .0611273 -0.04 0.967 .8845536 1.124745

2011.75 | .7715559 .0510116 -3.92 0.000 .6777819 .8783039

2012 | .8608309 .0608847 -2.12 0.034 .749401 .9888296

2012.25 | .7554164 .049427 -4.29 0.000 .6644957 .8587774

2012.5 | .8833671 .0661789 -1.66 0.098 .7627322 1.023082

2012.75 | .682327 .0538708 -4.84 0.000 .5845059 .7965192

2013 | .7685268 .057314 -3.53 0.000 .6640173 .8894851

2013.25 | .7376836 .0579534 -3.87 0.000 .6324099 .8604817

2013.5 | .8598024 .06872 -1.89 0.059 .7351333 1.005614

2013.75 | .6334582 .0534293 -5.41 0.000 .5369367 .7473309

2014 | .7330403 .0579368 -3.93 0.000 .6278445 .8558619

2014.25 | .7642036 .063673 -3.23 0.001 .6490638 .8997684

2014.5 | .8154606 .0644189 -2.58 0.010 .6984908 .9520183

2014.75 | .7877603 .0626774 -3.00 0.003 .6740143 .920702

2015 | .7067381 .0570227 -4.30 0.000 .6033647 .8278223

2015.25 | .6635639 .0534321 -5.09 0.000 .5666847 .7770054

2015.5 | .8852138 .0734877 -1.47 0.142 .7522878 1.041627

2015.75 | .694816 .0661801 -3.82 0.000 .5764933 .8374239

2016 | .734491 .0714355 -3.17 0.002 .6070156 .8887367

|

\_cons | .0000534 3.64e-06 -144.25 0.000 .0000467 .0000611

ln(hours) | 1 (exposure)

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

/lnalpha | -1.052554 .071308 -1.192315 -.9127933

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

alpha | .349045 .0248897 .3035177 .4014014

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

(est1 stored)

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

. est store nbin

.

. pause "next"

.

. // test for over-dispersion

. lrtest pois nbin, stats force

Likelihood-ratio test LR chi2(1) = 6201.12

(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 | 22,446 -45450.16 -41816.81 78 83789.61 84415.08

nbin | 22,446 -40040.04 -38716.25 79 77590.49 78223.98

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

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

.

. pause "next"

.

. // final model + diagnostics/assessment

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

. predict cv3\_yhat

(option n assumed; predicted number of events)

(7,843 missing values generated)

. gen cv3\_res = dv - cv3\_yhat

(7,843 missing values generated)

.

. summ dv cv3\_yhat

Variable | Obs Mean Std. Dev. Min Max

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

dv | 30,289 2.177721 3.851734 0 71

cv3\_yhat | 22,446 2.749225 3.938153 .0000994 39.85905

.

. pause "next"

. /\*

> scatter dv cv3\_yhat

>

> pause "next"

>

> scatter cv3\_res dv

>

> pause "next"

>

> scatter cv3\_res cv3\_yhat

> \*/

. pause "complete: C.V.3"