. // Model C.SSV.1

.

. // poisson model

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

Iteration 0: log pseudolikelihood = -53719.83

Iteration 1: log pseudolikelihood = -49526.986

Iteration 2: log pseudolikelihood = -49501.074

Iteration 3: log pseudolikelihood = -49501.058

Iteration 4: log pseudolikelihood = -49501.058

Generalized linear models No. of obs = 28,337

Optimization : ML Residual df = 28,255

Scale parameter = 1

Deviance = 51361.71095 (1/df) Deviance = 1.817792

Pearson = 1173788.383 (1/df) Pearson = 41.54268

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

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

AIC = 3.499528

Log pseudolikelihood = -49501.05794 BIC = -238306.4

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

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

| Robust

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

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

p48\_ss | .9999478 .0230526 -0.00 0.998 .9557712 1.046166

p75\_ss | 1.003747 .0014474 2.59 0.009 1.000914 1.006588

mine\_time | 1.001328 .0015112 0.88 0.379 .9983709 1.004295

onsite\_insp\_hours | .9993585 .0001316 -4.87 0.000 .9991007 .9996164

|

state |

AL | .9583123 .0850443 -0.48 0.631 .8053195 1.14037

AR | 1.720417 .0878486 10.63 0.000 1.556572 1.901508

CO | .6782657 .0704573 -3.74 0.000 .5533224 .8314219

IL | 1.276554 .1036391 3.01 0.003 1.088763 1.496737

IN | 1.109414 .1374586 0.84 0.402 .8702179 1.414358

MD | 1.108121 .1376739 0.83 0.409 .8686262 1.413647

MT | .5021339 .0240697 -14.37 0.000 .4571064 .5515969

NM | .6898052 .0301312 -8.50 0.000 .6332065 .7514631

OH | .9078109 .0536526 -1.64 0.102 .8085157 1.019301

OK | 1.738382 .3491758 2.75 0.006 1.172656 2.577031

PA | 1.029792 .0988166 0.31 0.760 .8532382 1.24288

TN | 1.535854 .1432802 4.60 0.000 1.279208 1.843991

UT | .4552677 .0688842 -5.20 0.000 .3384354 .6124319

VA | .8385555 .0644369 -2.29 0.022 .7213119 .9748561

WV | 1.036662 .0563548 0.66 0.508 .931889 1.153214

WY | .7166541 .0370907 -6.44 0.000 .6475232 .7931656

|

time |

2000 | .9818077 .0546032 -0.33 0.741 .8804139 1.094879

2000.25 | 1.110908 .0603417 1.94 0.053 .9987186 1.235701

2000.5 | 1.262849 .0627397 4.70 0.000 1.145679 1.392003

2000.75 | .9243958 .0456439 -1.59 0.111 .8391279 1.018328

2001 | .9118297 .0394459 -2.13 0.033 .837704 .9925145

2001.5 | 1.189037 .063998 3.22 0.001 1.069993 1.321326

2001.75 | .9236974 .0512676 -1.43 0.153 .8284872 1.029849

2002 | .9641537 .0509949 -0.69 0.490 .8692116 1.069466

2002.25 | .9631406 .0522462 -0.69 0.489 .8659956 1.071183

2002.5 | 1.045977 .0653429 0.72 0.472 .9254376 1.182218

2002.75 | .9301412 .0524209 -1.28 0.199 .8328693 1.038774

2003 | .8157572 .0468268 -3.55 0.000 .728953 .9128981

2003.25 | .8860312 .052285 -2.05 0.040 .7892587 .9946692

2003.5 | .9809143 .0547511 -0.35 0.730 .8792655 1.094314

2003.75 | .7456681 .0389474 -5.62 0.000 .6731099 .8260478

2004 | .7586018 .0458151 -4.57 0.000 .6739169 .8539283

2004.25 | .8296766 .0472338 -3.28 0.001 .7420781 .9276156

2004.5 | .9072264 .0501012 -1.76 0.078 .8141576 1.010934

2004.75 | .7168904 .0436328 -5.47 0.000 .6362755 .807719

2005 | .6996158 .0415651 -6.01 0.000 .622714 .7860145

2005.25 | .7908037 .0465426 -3.99 0.000 .7046467 .8874952

2005.5 | .8601743 .0533693 -2.43 0.015 .7616824 .971402

2005.75 | .7163357 .0452532 -5.28 0.000 .6329123 .810755

2006 | .727723 .0460351 -5.02 0.000 .642865 .8237821

2006.25 | .6937598 .0437597 -5.80 0.000 .6130821 .7850541

2006.5 | .8439915 .0608727 -2.35 0.019 .7327322 .9721445

2006.75 | .6670054 .0461897 -5.85 0.000 .5823502 .7639668

2007 | .6866122 .047499 -5.43 0.000 .5995514 .786315

2007.25 | .715019 .0587522 -4.08 0.000 .6086609 .8399622

2007.5 | .8231144 .0555186 -2.89 0.004 .7211858 .939449

2007.75 | .7321828 .0498177 -4.58 0.000 .6407724 .8366335

2008 | .6937299 .044681 -5.68 0.000 .6114587 .7870707

2008.25 | .682503 .0463237 -5.63 0.000 .5974902 .7796117

2008.5 | .7899284 .0588211 -3.17 0.002 .6826592 .9140532

2008.75 | .6276526 .0476927 -6.13 0.000 .5408043 .7284479

2009 | .6459649 .0431542 -6.54 0.000 .5666876 .7363328

2009.25 | .5995422 .0462374 -6.63 0.000 .5154352 .6973736

2009.5 | .6771221 .0503618 -5.24 0.000 .5852721 .7833868

2009.75 | .5844873 .0412904 -7.60 0.000 .5089123 .6712855

2010 | .5931738 .055672 -5.56 0.000 .4935065 .7129696

2010.25 | .5877075 .0496022 -6.30 0.000 .4981044 .6934292

2010.5 | .6896157 .0467407 -5.48 0.000 .6038297 .7875893

2010.75 | .5649233 .043183 -7.47 0.000 .4863213 .6562294

2011 | .5725251 .0426918 -7.48 0.000 .4946779 .662623

2011.25 | .5421079 .0412195 -8.05 0.000 .4670508 .629227

2011.5 | .6228487 .0449408 -6.56 0.000 .5407111 .7174636

2011.75 | .4829302 .0362857 -9.69 0.000 .4168003 .5595524

2012 | .5350634 .0403092 -8.30 0.000 .4616147 .6201988

2012.25 | .4721967 .0356757 -9.93 0.000 .4072043 .5475623

2012.5 | .5377892 .0451271 -7.39 0.000 .4562321 .6339256

2012.75 | .4347339 .0367399 -9.86 0.000 .3683727 .5130499

2013 | .4810475 .0400427 -8.79 0.000 .4086329 .5662947

2013.25 | .4755179 .0427474 -8.27 0.000 .3987005 .5671356

2013.5 | .5465522 .0498135 -6.63 0.000 .457143 .6534484

2013.75 | .4085479 .0367028 -9.96 0.000 .3425889 .487206

2014 | .4729553 .0461385 -7.68 0.000 .3906451 .5726086

2014.25 | .4993389 .0510466 -6.79 0.000 .4086753 .6101159

2014.5 | .5329401 .0487107 -6.89 0.000 .4455317 .637497

2014.75 | .5001719 .0470566 -7.36 0.000 .4159466 .601452

2015 | .469393 .0461613 -7.69 0.000 .3871037 .5691752

2015.25 | .4326604 .0415952 -8.71 0.000 .3583556 .5223723

2015.5 | .5655874 .0542704 -5.94 0.000 .4686229 .6826153

2015.75 | .4354942 .0475527 -7.61 0.000 .3515908 .5394202

2016 | .4914049 .0531044 -6.57 0.000 .3976062 .6073314

|

\_cons | .0000899 4.79e-06 -174.68 0.000 .000081 .0000998

ln(hours) | 1 (exposure)

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

.

. quietly poisson dv `count\_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 = 51365.03

Prob > chi2(28255) = 0.0000

Pearson goodness-of-fit = 1171962

Prob > chi2(28255) = 0.0000

.

. pause "next"

.

. // negative binomial model

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

Iteration 0: log pseudolikelihood = -47674.003

Iteration 1: log pseudolikelihood = -47105.32

Iteration 2: log pseudolikelihood = -47100.818

Iteration 3: log pseudolikelihood = -47100.813

Generalized linear models No. of obs = 28,337

Optimization : ML Residual df = 28,255

Scale parameter = 1

Deviance = 22327.05802 (1/df) Deviance = .7901985

Pearson = 859025.5991 (1/df) Pearson = 30.4026

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

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

AIC = 3.330121

Log pseudolikelihood = -47100.81346 BIC = -267341

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

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

| Robust

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

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

p48\_ss | 1.005591 .0352922 0.16 0.874 .9387448 1.077197

p75\_ss | 1.009195 .0018428 5.01 0.000 1.00559 1.012813

mine\_time | 1.001722 .0013249 1.30 0.193 .9991285 1.004322

onsite\_insp\_hours | .9992316 .000137 -5.60 0.000 .9989631 .9995003

|

state |

AL | 1.016204 .1066468 0.15 0.878 .8272759 1.248278

AR | 1.612278 .0705096 10.92 0.000 1.479838 1.75657

CO | .8360389 .1054751 -1.42 0.156 .6528876 1.070569

IL | 1.334453 .0824915 4.67 0.000 1.182183 1.506335

IN | 1.116953 .09655 1.28 0.201 .9428801 1.323162

MD | 1.284753 .2367165 1.36 0.174 .8953347 1.843547

MT | .5781586 .0233981 -13.54 0.000 .5340708 .6258859

NM | .7569818 .0291988 -7.22 0.000 .7018629 .8164292

OH | .9511586 .0762779 -0.62 0.532 .8128138 1.11305

OK | 1.834991 .3287038 3.39 0.001 1.291687 2.606817

PA | 1.373446 .1014219 4.30 0.000 1.188379 1.587335

TN | 1.758274 .1648973 6.02 0.000 1.463046 2.113077

UT | .536821 .0932841 -3.58 0.000 .3818697 .7546471

VA | .9343794 .0464646 -1.36 0.172 .8476077 1.030034

WV | 1.284668 .0594146 5.42 0.000 1.17334 1.40656

WY | .8298793 .0492126 -3.14 0.002 .7388187 .9321632

|

time |

2000 | .8990258 .081235 -1.18 0.239 .7531101 1.073213

2000.25 | 1.065795 .0961012 0.71 0.480 .8931455 1.271819

2000.5 | 1.179869 .1019572 1.91 0.056 .9960429 1.397621

2000.75 | .7786661 .0657806 -2.96 0.003 .6598466 .9188816

2001 | .795131 .0621918 -2.93 0.003 .6821208 .9268641

2001.5 | 1.076311 .0775168 1.02 0.307 .9346163 1.239487

2001.75 | .8488074 .0622003 -2.24 0.025 .7352472 .9799071

2002 | .9675466 .1123393 -0.28 0.776 .7706214 1.214794

2002.25 | .9146889 .0705392 -1.16 0.248 .7863759 1.063939

2002.5 | .979968 .0730765 -0.27 0.786 .8467155 1.134191

2002.75 | .775736 .0696486 -2.83 0.005 .6505636 .9249923

2003 | .7613905 .0730384 -2.84 0.004 .6308901 .9188852

2003.25 | .8475659 .0898802 -1.56 0.119 .6885061 1.043372

2003.5 | .938817 .0871633 -0.68 0.496 .7826222 1.126185

2003.75 | .6475176 .0589992 -4.77 0.000 .5416186 .7741225

2004 | .6990436 .0662222 -3.78 0.000 .5805876 .8416679

2004.25 | .7356774 .069468 -3.25 0.001 .6113794 .885246

2004.5 | .7895133 .0708374 -2.63 0.008 .6621969 .941308

2004.75 | .6280259 .0528713 -5.53 0.000 .5324978 .7406914

2005 | .6418776 .0591243 -4.81 0.000 .5358545 .7688783

2005.25 | .6858555 .0624613 -4.14 0.000 .5737374 .8198834

2005.5 | .7415379 .0646892 -3.43 0.001 .6249963 .8798106

2005.75 | .6044055 .0581317 -5.24 0.000 .5005642 .7297884

2006 | .6800598 .0680198 -3.85 0.000 .5589972 .827341

2006.25 | .6372687 .0619849 -4.63 0.000 .5266586 .7711094

2006.5 | .7228732 .0691556 -3.39 0.001 .5992798 .8719562

2006.75 | .6022961 .0599261 -5.10 0.000 .4955857 .7319835

2007 | .5816435 .0572236 -5.51 0.000 .4796378 .705343

2007.25 | .6239401 .0631461 -4.66 0.000 .5116779 .7608325

2007.5 | .7518842 .0821948 -2.61 0.009 .6068746 .9315432

2007.75 | .6022167 .0605548 -5.04 0.000 .494495 .7334049

2008 | .5876302 .0566214 -5.52 0.000 .4865037 .7097772

2008.25 | .5911666 .0592205 -5.25 0.000 .4857807 .7194151

2008.5 | .6191861 .0626673 -4.74 0.000 .5077756 .7550412

2008.75 | .5116302 .0515147 -6.66 0.000 .4200015 .6232488

2009 | .5346655 .0522904 -6.40 0.000 .4414021 .6476344

2009.25 | .5410829 .0574378 -5.79 0.000 .4394464 .6662262

2009.5 | .5875541 .0604564 -5.17 0.000 .4802456 .7188401

2009.75 | .4994548 .0509046 -6.81 0.000 .4090171 .6098892

2010 | .4981895 .0513469 -6.76 0.000 .407065 .6097129

2010.25 | .4958033 .0584491 -5.95 0.000 .3935167 .6246772

2010.5 | .6236937 .0626939 -4.70 0.000 .512163 .7595116

2010.75 | .500065 .0527434 -6.57 0.000 .4066751 .6149012

2011 | .5013811 .0515686 -6.71 0.000 .4098446 .6133618

2011.25 | .4764701 .0481131 -7.34 0.000 .3909155 .5807489

2011.5 | .5375853 .0524845 -6.36 0.000 .4439607 .6509538

2011.75 | .4243019 .0425382 -8.55 0.000 .3486086 .5164304

2012 | .4762115 .0497316 -7.10 0.000 .3880677 .584376

2012.25 | .4092623 .0412657 -8.86 0.000 .3358734 .4986869

2012.5 | .4759134 .0521649 -6.77 0.000 .3839085 .5899676

2012.75 | .3635884 .0402542 -9.14 0.000 .2926647 .4516995

2013 | .432135 .0480621 -7.54 0.000 .3474952 .5373908

2013.25 | .4028287 .0428244 -8.55 0.000 .3270617 .4961477

2013.5 | .475336 .0517472 -6.83 0.000 .3840035 .5883913

2013.75 | .345227 .0384027 -9.56 0.000 .2775992 .4293302

2014 | .3971317 .0436426 -8.40 0.000 .3201786 .4925801

2014.25 | .4125323 .0463092 -7.89 0.000 .3310591 .5140558

2014.5 | .4331912 .0482445 -7.51 0.000 .3482421 .5388624

2014.75 | .4411878 .0499228 -7.23 0.000 .3534316 .5507337

2015 | .3909025 .0432347 -8.49 0.000 .3147195 .4855268

2015.25 | .3717409 .0409559 -8.98 0.000 .299544 .4613387

2015.5 | .4772676 .0530805 -6.65 0.000 .3837899 .5935132

2015.75 | .3937442 .0472665 -7.76 0.000 .3111951 .4981906

2016 | .4131901 .050941 -7.17 0.000 .3244948 .5261288

|

\_cons | .0000924 7.16e-06 -119.85 0.000 .0000794 .0001076

ln(hours) | 1 (exposure)

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

.

. pause "next"

.

. eststo clear

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

Fitting Poisson model:

Iteration 0: log pseudolikelihood = -51266.886

Iteration 1: log pseudolikelihood = -49526.173

Iteration 2: log pseudolikelihood = -49501.095

Iteration 3: log pseudolikelihood = -49501.058

Iteration 4: log pseudolikelihood = -49501.058

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 = -46192.204

Iteration 1: log pseudolikelihood = -45942.681

Iteration 2: log pseudolikelihood = -45936.889

Iteration 3: log pseudolikelihood = -45936.885

Negative binomial regression Number of obs = 28,337

Wald chi2(82) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -45936.885 Pseudo R2 = 0.0348

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

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

| Robust

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

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

p48\_ss | .9999782 .0298549 -0.00 0.999 .9431428 1.060239

p75\_ss | 1.00736 .0015706 4.70 0.000 1.004286 1.010443

mine\_time | 1.001469 .0012988 1.13 0.258 .9989263 1.004017

onsite\_insp\_hours | .9992823 .0001325 -5.41 0.000 .9990226 .9995421

|

state |

AL | 1.007605 .0975764 0.08 0.938 .8334124 1.218206

AR | 1.691306 .0729236 12.19 0.000 1.554251 1.840447

CO | .778948 .0937038 -2.08 0.038 .6153368 .9860616

IL | 1.303447 .0785171 4.40 0.000 1.158294 1.466791

IN | 1.115379 .1043073 1.17 0.243 .9285822 1.339752

MD | 1.222903 .1874526 1.31 0.189 .9055569 1.651462

MT | .5570463 .0227679 -14.32 0.000 .5141627 .6035067

NM | .75005 .0285063 -7.57 0.000 .696209 .8080548

OH | .9478598 .0676628 -0.75 0.453 .8241024 1.090202

OK | 1.814918 .3306643 3.27 0.001 1.269914 2.593817

PA | 1.311112 .1022844 3.47 0.001 1.125212 1.527724

TN | 1.687465 .1538604 5.74 0.000 1.411314 2.017651

UT | .5069057 .0832294 -4.14 0.000 .3674239 .6993376

VA | .9169985 .0480253 -1.65 0.098 .8275404 1.016127

WV | 1.21676 .0564077 4.23 0.000 1.111077 1.332495

WY | .802878 .0434493 -4.06 0.000 .7220796 .8927174

|

time |

2000 | .9366477 .0675763 -0.91 0.364 .8131388 1.078917

2000.25 | 1.088509 .0785367 1.18 0.240 .9449685 1.253854

2000.5 | 1.207837 .0816423 2.79 0.005 1.057968 1.378937

2000.75 | .8349002 .0571401 -2.64 0.008 .7300941 .9547514

2001 | .833806 .0522545 -2.90 0.004 .7374292 .9427784

2001.5 | 1.108354 .0687996 1.66 0.097 .9813888 1.251744

2001.75 | .8737488 .0550999 -2.14 0.032 .7721622 .9887003

2002 | .9544216 .0759636 -0.59 0.558 .8165675 1.115548

2002.25 | .931554 .0616146 -1.07 0.284 .8182915 1.060493

2002.5 | 1.005376 .0670996 0.08 0.936 .8821012 1.145878

2002.75 | .8263519 .0598828 -2.63 0.008 .7169378 .9524641

2003 | .7803288 .0600764 -3.22 0.001 .6710345 .9074244

2003.25 | .8458605 .068834 -2.06 0.040 .7211575 .9921274

2003.5 | .9552378 .0703227 -0.62 0.534 .82689 1.103507

2003.75 | .6835975 .0496058 -5.24 0.000 .5929695 .788077

2004 | .7291151 .0570768 -4.04 0.000 .625406 .8500219

2004.25 | .7734714 .0594741 -3.34 0.001 .6652628 .8992807

2004.5 | .8430994 .0612998 -2.35 0.019 .7311221 .9722269

2004.75 | .6708224 .0464348 -5.77 0.000 .5857156 .7682957

2005 | .6647483 .0490288 -5.54 0.000 .5752763 .7681359

2005.25 | .7224134 .0538682 -4.36 0.000 .6241864 .8360982

2005.5 | .7838708 .0572846 -3.33 0.001 .6792653 .9045853

2005.75 | .6467665 .0521551 -5.40 0.000 .5522132 .7575098

2006 | .6967309 .056853 -4.43 0.000 .5937551 .817566

2006.25 | .6686284 .0542416 -4.96 0.000 .5703379 .783858

2006.5 | .7707508 .0623315 -3.22 0.001 .6577735 .9031328

2006.75 | .6270924 .0520759 -5.62 0.000 .532899 .7379352

2007 | .6227373 .0517518 -5.70 0.000 .5291355 .7328969

2007.25 | .6594093 .0582821 -4.71 0.000 .5545253 .7841313

2007.5 | .7816114 .0689789 -2.79 0.005 .6574619 .9292044

2007.75 | .6446887 .0537849 -5.26 0.000 .5474396 .7592134

2008 | .6210624 .0494701 -5.98 0.000 .5312924 .7260005

2008.25 | .619019 .0519442 -5.72 0.000 .5251416 .7296785

2008.5 | .6724391 .0582274 -4.58 0.000 .5674744 .796819

2008.75 | .550288 .0474052 -6.93 0.000 .464796 .651505

2009 | .5660035 .0457486 -7.04 0.000 .4830796 .6631618

2009.25 | .5555393 .0490648 -6.66 0.000 .4672372 .6605295

2009.5 | .6176603 .0533933 -5.57 0.000 .5213964 .7316971

2009.75 | .5275039 .0453412 -7.44 0.000 .4457191 .6242953

2010 | .5266792 .0477069 -7.08 0.000 .4410053 .628997

2010.25 | .5262205 .0535919 -6.30 0.000 .4310014 .6424758

2010.5 | .6479795 .0545057 -5.16 0.000 .5494918 .7641196

2010.75 | .5218518 .0462047 -7.35 0.000 .4387143 .620744

2011 | .5243451 .0454134 -7.45 0.000 .4424812 .6213546

2011.25 | .4960979 .042438 -8.19 0.000 .4195199 .5866542

2011.5 | .5691845 .0466907 -6.87 0.000 .4846501 .6684636

2011.75 | .4440844 .0376412 -9.58 0.000 .3761114 .5243419

2012 | .4949907 .0432789 -8.04 0.000 .4170358 .5875174

2012.25 | .427464 .036317 -10.00 0.000 .3618947 .5049134

2012.5 | .4921186 .0457173 -7.63 0.000 .4101985 .5903989

2012.75 | .3866134 .0370583 -9.91 0.000 .3203953 .4665173

2013 | .4434367 .0411711 -8.76 0.000 .3696591 .5319391

2013.25 | .4235701 .0391612 -9.29 0.000 .3533681 .5077189

2013.5 | .4917426 .0467754 -7.46 0.000 .4081032 .5925236

2013.75 | .3645362 .0355326 -10.35 0.000 .3011418 .4412759

2014 | .4179388 .0408918 -8.92 0.000 .3450084 .5062857

2014.25 | .4350862 .0432888 -8.36 0.000 .3580018 .5287683

2014.5 | .4596237 .0447038 -7.99 0.000 .3798508 .5561499

2014.75 | .4551069 .0446738 -8.02 0.000 .3754556 .5516559

2015 | .413185 .0407219 -8.97 0.000 .3406069 .5012283

2015.25 | .3898743 .0382509 -9.60 0.000 .3216715 .4725379

2015.5 | .5047882 .0496063 -6.96 0.000 .4163517 .6120093

2015.75 | .4068254 .0442737 -8.26 0.000 .3286807 .5035493

2016 | .439291 .0494165 -7.31 0.000 .3523703 .5476528

|

\_cons | .0000904 5.71e-06 -147.42 0.000 .0000799 .0001023

ln(hours) | 1 (exposure)

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

/lnalpha | -1.007398 .0666774 -1.138083 -.8767126

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

alpha | .3651679 .0243485 .3204326 .4161487

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

(est1 stored)

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

. est store nbin

.

. pause "next"

.

. // test for over-dispersion

. lrtest pois nbin, stats force

Likelihood-ratio test LR chi2(2) = 7131.66

(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 -49502.72 82 99169.43 99846.09

nbin | 28,337 -47591.31 -45936.89 84 92041.77 92734.93

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

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

.

. pause "next"

.

. // final model + diagnostics/assessment

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

. predict cssv1\_yhat

(option n assumed; predicted number of events)

(1,952 missing values generated)

. gen cssv1\_res = dv - cssv1\_yhat

(1,952 missing values generated)

.

. summ dv cssv1\_yhat

Variable | Obs Mean Std. Dev. Min Max

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

dv | 30,289 2.177721 3.851734 0 71

cssv1\_yhat | 28,337 2.453586 3.810535 .0000969 51.57887

. /\*

> pause "next"

>

> scatter dv cssv1\_yhat

>

> pause "next"

>

> scatter cssv1\_res dv

>

> pause "next"

>

> scatter cssv1\_res cssv1\_yhat

> \*/

. pause "complete: C.SSV.1"