. // Model C.SSV.2

.

. // poisson model

. glm dv `ss\_lag\_1\_vars' `covariates' ib(freq).state ib(freq).time, family(poisson) link(log) vce(cl mineid) exposure(hours) iter(50) eform

note: sp75\_1322\_ss\_1lag omitted because of collinearity

Iteration 0: log pseudolikelihood = -50281.609

Iteration 1: log pseudolikelihood = -46746.192

Iteration 2: log pseudolikelihood = -46724.781

Iteration 3: log pseudolikelihood = -46724.663

Iteration 4: log pseudolikelihood = -46724.638

Iteration 5: log pseudolikelihood = -46724.632

Iteration 6: log pseudolikelihood = -46724.63

Iteration 7: log pseudolikelihood = -46724.63

Iteration 8: log pseudolikelihood = -46724.63

Generalized linear models No. of obs = 26,110

Optimization : ML Residual df = 25,950

Scale parameter = 1

Deviance = 47733.68347 (1/df) Deviance = 1.839448

Pearson = 1183993.299 (1/df) Pearson = 45.62595

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

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

AIC = 3.591316

Log pseudolikelihood = -46724.6299 BIC = -216179.7

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

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

| Robust

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

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

sp48\_11\_ss\_1lag | .9497898 .046218 -1.06 0.290 .8633899 1.044836

sp48\_25\_ss\_1lag | .954601 .0894315 -0.50 0.620 .7944698 1.147008

sp48\_26\_ss\_1lag | 1.0246 .1357748 0.18 0.854 .7902368 1.328468

sp48\_27\_ss\_1lag | 1.038131 .0779503 0.50 0.618 .8960613 1.202725

sp48\_28\_ss\_1lag | .9663519 .0593822 -0.56 0.578 .8567006 1.090038

sp48\_4\_ss\_1lag | .3106184 .2467127 -1.47 0.141 .0654861 1.473347

sp48\_5\_ss\_1lag | .9435715 .1142818 -0.48 0.632 .7441844 1.19638

sp48\_6\_ss\_1lag | .9985513 .079255 -0.02 0.985 .8546937 1.166622

sp48\_7\_ss\_1lag | 1.080013 .0431478 1.93 0.054 .998671 1.16798

sp48\_8\_ss\_1lag | 1.017888 .1435543 0.13 0.900 .7720645 1.34198

sp75\_100\_ss\_1lag | .9242266 .1494775 -0.49 0.626 .6731494 1.268953

sp75\_1002\_ss\_1lag | .9586044 .0387931 -1.04 0.296 .8855085 1.037734

sp75\_1003\_ss\_1lag | .9304503 .047455 -1.41 0.158 .8419378 1.028268

sp75\_1003\_2\_ss\_1lag | .8782221 .0815995 -1.40 0.162 .7320074 1.053642

sp75\_1311\_ss\_1lag | 1.134032 .0681256 2.09 0.036 1.008069 1.275734

sp75\_1315\_ss\_1lag | .6466482 .1190282 -2.37 0.018 .4508041 .9275734

sp75\_1316\_ss\_1lag | .85179 .111554 -1.22 0.221 .6589549 1.101056

sp75\_1318\_ss\_1lag | 5.08e-06 5.09e-06 -12.17 0.000 7.13e-07 .0000362

sp75\_1322\_ss\_1lag | 1 (omitted)

sp75\_1400\_ss\_1lag | 1.058416 .0789511 0.76 0.447 .9144544 1.225041

sp75\_1400\_1\_ss\_1lag | .7056852 .1743062 -1.41 0.158 .4348724 1.145144

sp75\_1403\_10\_ss\_1lag | 1.071798 .0147356 5.04 0.000 1.043302 1.101072

sp75\_1403\_5\_ss\_1lag | .9631067 .0196565 -1.84 0.065 .9253411 1.002414

sp75\_1403\_6\_ss\_1lag | .964298 .0122155 -2.87 0.004 .9406509 .9885396

sp75\_1403\_7\_ss\_1lag | 1.097701 .0616828 1.66 0.097 .9832243 1.225505

sp75\_1403\_8\_ss\_1lag | .9508452 .0156291 -3.07 0.002 .9207009 .9819765

sp75\_1404\_ss\_1lag | 1.233395 .4092372 0.63 0.527 .6436888 2.363353

sp75\_1404\_1\_ss\_1lag | .7276091 .2120556 -1.09 0.275 .4109818 1.288171

sp75\_1405\_ss\_1lag | .953913 .0118708 -3.79 0.000 .9309281 .9774654

sp75\_1405\_1\_ss\_1lag | .7893692 .0578408 -3.23 0.001 .6837678 .9112798

sp75\_153\_ss\_1lag | 2.250684 .2050237 8.91 0.000 1.882674 2.690629

sp75\_155\_ss\_1lag | .5324134 .0531921 -6.31 0.000 .4377312 .6475756

sp75\_156\_ss\_1lag | .4637497 .0812162 -4.39 0.000 .3290131 .6536634

sp75\_1719\_2\_ss\_1lag | .2681003 .0513788 -6.87 0.000 .1841505 .3903208

sp75\_1719\_4\_ss\_1lag | .9558873 .0957732 -0.45 0.653 .7854567 1.163298

sp75\_1720\_ss\_1lag | 1.021781 .038294 0.57 0.565 .9494164 1.099661

sp75\_1725\_ss\_1lag | .9875936 .0058374 -2.11 0.035 .9762185 .9991013

sp75\_1906\_ss\_1lag | 1.486297 .2391577 2.46 0.014 1.084277 2.037376

sp75\_1916\_ss\_1lag | 1.134299 .0676805 2.11 0.035 1.009111 1.275019

sp75\_203\_ss\_1lag | 1.044204 .023807 1.90 0.058 .9985702 1.091923

sp75\_204\_ss\_1lag | 1.089236 .0375093 2.48 0.013 1.018145 1.165291

sp75\_205\_ss\_1lag | 1.45523 .5503758 0.99 0.321 .6934302 3.053941

sp75\_207\_ss\_1lag | 1.607 .2469564 3.09 0.002 1.189069 2.171824

sp75\_208\_ss\_1lag | 1.035243 .0212798 1.68 0.092 .9943639 1.077802

sp75\_209\_ss\_1lag | 1.055326 .0961598 0.59 0.555 .8827273 1.261673

sp75\_212\_ss\_1lag | 1.123338 .0814961 1.60 0.109 .9744448 1.294981

sp75\_213\_ss\_1lag | 1.191562 .0279367 7.48 0.000 1.138046 1.247594

sp75\_215\_ss\_1lag | .7225987 .0845613 -2.78 0.005 .574495 .9088833

sp75\_332\_ss\_1lag | .9692075 .1394509 -0.22 0.828 .731046 1.284958

sp75\_334\_ss\_1lag | .9837345 .0501351 -0.32 0.748 .8902196 1.087073

sp75\_337\_ss\_1lag | .9307143 .0493889 -1.35 0.176 .8387777 1.032728

sp75\_340\_ss\_1lag | 1.011239 .0193305 0.58 0.559 .9740531 1.049845

sp75\_343\_ss\_1lag | 1.145637 .1025035 1.52 0.129 .961363 1.365232

sp75\_373\_ss\_1lag | .0000214 .0000215 -10.73 0.000 3.00e-06 .0001528

sp75\_388\_ss\_1lag | 1.030716 .0751483 0.41 0.678 .8934681 1.189047

sp75\_389\_ss\_1lag | 1.393195 .4391981 1.05 0.293 .7510602 2.584337

sp75\_500\_ss\_1lag | .9956735 .0882215 -0.05 0.961 .836944 1.184507

sp75\_500\_1\_ss\_1lag | 1.152066 .3216367 0.51 0.612 .6665562 1.991214

sp75\_501\_ss\_1lag | .7739919 .1095494 -1.81 0.070 .5864876 1.021442

sp75\_501\_2\_ss\_1lag | .6384562 .2877879 -1.00 0.320 .2639047 1.544597

sp75\_502\_ss\_1lag | .9300869 .1926945 -0.35 0.726 .6196871 1.395965

sp75\_503\_ss\_1lag | 1.0054 .0071298 0.76 0.448 .991523 1.019472

sp75\_505\_ss\_1lag | .6751026 .0894086 -2.97 0.003 .5207618 .8751861

sp75\_506\_1\_ss\_1lag | .9495337 .2291287 -0.21 0.830 .5917113 1.52374

sp75\_507\_ss\_1lag | 1.114627 .0760637 1.59 0.112 .9750851 1.274139

sp75\_507\_1\_ss\_1lag | 1.048026 .0458988 1.07 0.284 .9618188 1.14196

sp75\_509\_ss\_1lag | 1.407627 .1202032 4.00 0.000 1.190694 1.664084

sp75\_512\_1\_ss\_1lag | 1.164668 .1182915 1.50 0.133 .9544397 1.421202

sp75\_523\_ss\_1lag | .906117 .0302356 -2.95 0.003 .8487526 .9673586

sp75\_523\_3\_ss\_1lag | .9649961 .0138921 -2.48 0.013 .9381487 .9926119

sp75\_524\_ss\_1lag | 1.362063 .2249794 1.87 0.061 .9853709 1.88276

sp75\_602\_ss\_1lag | .9832019 .0509252 -0.33 0.744 .8882894 1.088256

sp75\_603\_ss\_1lag | 1.057838 .0462262 1.29 0.198 .971008 1.152433

sp75\_604\_ss\_1lag | 1.021598 .008565 2.55 0.011 1.004948 1.038524

sp75\_605\_ss\_1lag | .9903975 .0301487 -0.32 0.751 .9330353 1.051286

sp75\_606\_ss\_1lag | 1.023144 .02318 1.01 0.313 .9787059 1.0696

sp75\_607\_ss\_1lag | 1.020262 .0814098 0.25 0.802 .8725524 1.192975

sp75\_703\_3\_ss\_1lag | 1.163129 .0750936 2.34 0.019 1.02488 1.320028

sp75\_807\_ss\_1lag | 1.046417 .020358 2.33 0.020 1.007267 1.087089

sp75\_810\_ss\_1lag | 1.108864 .1240614 0.92 0.356 .8905219 1.38074

sp75\_811\_ss\_1lag | .8705222 .1212032 -1.00 0.319 .6626233 1.14365

sp75\_812\_ss\_1lag | .898735 .1332667 -0.72 0.472 .6720682 1.201849

sp75\_816\_ss\_1lag | 1.072348 .0970189 0.77 0.440 .8981005 1.280404

sp75\_817\_ss\_1lag | .7852809 .1081197 -1.76 0.079 .5995552 1.028539

sp75\_906\_ss\_1lag | .3639514 .1116024 -3.30 0.001 .1995401 .6638297

mine\_time | 1.001471 .0014489 1.02 0.310 .9986351 1.004315

onsite\_insp\_hours | .9995484 .0001103 -4.09 0.000 .9993322 .9997646

|

state |

AL | .9973372 .0797406 -0.03 0.973 .8526789 1.166537

AR | 1.793623 .085204 12.30 0.000 1.634165 1.968641

CO | .6834941 .0710099 -3.66 0.000 .5575724 .8378537

IL | 1.272892 .0897556 3.42 0.001 1.108589 1.461546

IN | 1.106311 .1220728 0.92 0.360 .8911557 1.373411

MD | 1.165584 .1491504 1.20 0.231 .9070307 1.497838

MT | .5086911 .0226349 -15.19 0.000 .466207 .5550466

NM | .7024748 .0298266 -8.32 0.000 .6463821 .7634352

OH | 1.043194 .087224 0.51 0.613 .885511 1.228955

OK | 1.727452 .2923865 3.23 0.001 1.239746 2.407018

PA | 1.044516 .1002424 0.45 0.650 .8654163 1.260681

TN | 1.571835 .1532894 4.64 0.000 1.298361 1.90291

UT | .450717 .068079 -5.28 0.000 .3352226 .6060027

VA | .862961 .0650628 -1.95 0.051 .7444149 1.000385

WV | 1.095414 .0536018 1.86 0.063 .9952371 1.205674

WY | .7103835 .0297534 -8.16 0.000 .6543972 .7711595

|

time |

2000.25 | .9200586 .0610113 -1.26 0.209 .8079235 1.047757

2000.5 | 1.043619 .0650982 0.68 0.494 .92352 1.179336

2000.75 | .7754669 .0490851 -4.02 0.000 .6849902 .8778941

2001 | .7553192 .04351 -4.87 0.000 .674679 .8455978

2001.25 | .8283385 .0439728 -3.55 0.000 .7464854 .9191668

2001.75 | .7561316 .0396241 -5.33 0.000 .6823249 .837922

2002 | .8050914 .0526399 -3.32 0.001 .7082563 .9151661

2002.25 | .7991354 .0485259 -3.69 0.000 .7094681 .9001355

2002.5 | .8689725 .052752 -2.31 0.021 .7714945 .9787667

2002.75 | .7702425 .0451973 -4.45 0.000 .6865616 .8641227

2003 | .682897 .0425069 -6.13 0.000 .6044664 .7715041

2003.25 | .7251474 .0441379 -5.28 0.000 .6435996 .8170278

2003.5 | .8074459 .056318 -3.07 0.002 .7042771 .9257277

2003.75 | .631344 .0395968 -7.33 0.000 .5583162 .713924

2004 | .6414508 .0439111 -6.49 0.000 .5609104 .7335558

2004.25 | .6989865 .0455673 -5.49 0.000 .6151464 .7942534

2004.5 | .7781446 .0502036 -3.89 0.000 .6857145 .8830338

2004.75 | .6001221 .0404486 -7.58 0.000 .5258576 .6848746

2005 | .595158 .0426618 -7.24 0.000 .5171505 .6849322

2005.25 | .6598909 .0450465 -6.09 0.000 .577253 .7543591

2005.5 | .7150839 .0488244 -4.91 0.000 .6255165 .8174763

2005.75 | .5947659 .043685 -7.07 0.000 .5150223 .6868566

2006 | .6138585 .0448994 -6.67 0.000 .5318743 .70848

2006.25 | .5934546 .0415372 -7.46 0.000 .5173805 .6807144

2006.5 | .7123479 .054313 -4.45 0.000 .6134684 .8271648

2006.75 | .572571 .0434818 -7.34 0.000 .4933873 .664463

2007 | .5709408 .0431956 -7.41 0.000 .492257 .6622018

2007.25 | .5981978 .0534638 -5.75 0.000 .5020753 .712723

2007.5 | .698471 .0511482 -4.90 0.000 .6050843 .8062707

2007.75 | .5846445 .0478664 -6.56 0.000 .4979684 .6864074

2008 | .5573239 .0390942 -8.33 0.000 .4857347 .6394642

2008.25 | .5467273 .0395635 -8.34 0.000 .4744323 .6300387

2008.5 | .630147 .0538385 -5.41 0.000 .5329874 .7450181

2008.75 | .5201853 .0421515 -8.07 0.000 .4437964 .6097227

2009 | .5197957 .040958 -8.30 0.000 .4454112 .6066025

2009.25 | .4809699 .0408146 -8.63 0.000 .4072732 .5680022

2009.5 | .5416626 .0455972 -7.28 0.000 .4592769 .6388267

2009.75 | .468883 .0362598 -9.79 0.000 .4029389 .5456194

2010 | .4752444 .0468845 -7.54 0.000 .3916905 .5766217

2010.25 | .4760925 .0430835 -8.20 0.000 .3987153 .5684862

2010.5 | .5602262 .0412456 -7.87 0.000 .4849482 .6471896

2010.75 | .4466894 .0362558 -9.93 0.000 .3809934 .5237137

2011 | .449367 .0365978 -9.82 0.000 .3830687 .5271396

2011.25 | .4292877 .0345884 -10.50 0.000 .3665775 .5027258

2011.5 | .4925933 .0389279 -8.96 0.000 .4219112 .5751168

2011.75 | .3820891 .030923 -11.89 0.000 .3260437 .4477685

2012 | .4205606 .0344945 -10.56 0.000 .358107 .4939061

2012.25 | .3711837 .0306397 -12.01 0.000 .3157371 .4363673

2012.5 | .4274013 .0365972 -9.93 0.000 .361368 .505501

2012.75 | .3390646 .0298502 -12.29 0.000 .2853286 .4029207

2013 | .3733727 .033401 -11.01 0.000 .3133258 .4449273

2013.25 | .3710117 .0358892 -10.25 0.000 .3069362 .4484635

2013.5 | .4224544 .0399936 -9.10 0.000 .350911 .5085842

2013.75 | .3259359 .0320072 -11.42 0.000 .2688706 .3951127

2014 | .3696951 .0374343 -9.83 0.000 .303147 .450852

2014.25 | .3894394 .041003 -8.96 0.000 .3168248 .4786969

2014.5 | .4203879 .0401921 -9.06 0.000 .3485533 .5070272

2014.75 | .3840819 .0381043 -9.65 0.000 .3162112 .4665203

2015 | .3612711 .0369472 -9.96 0.000 .2956521 .441454

2015.25 | .3342236 .0342387 -10.70 0.000 .2734248 .4085417

2015.5 | .4444454 .0441526 -8.16 0.000 .3658115 .5399822

2015.75 | .3252186 .0348825 -10.47 0.000 .2635584 .4013045

2016 | .371733 .0412285 -8.92 0.000 .2991061 .4619948

|

\_cons | .0001068 6.41e-06 -152.30 0.000 .0000949 .0001201

ln(hours) | 1 (exposure)

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.

. quietly poisson dv `ss\_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 = 47733.68

Prob > chi2(25946) = 0.0000

Pearson goodness-of-fit = 1183999

Prob > chi2(25946) = 0.0000

.

. pause "next"

.

. // negative binomial model

. glm dv `ss\_lag\_1\_vars' `covariates' ib(freq).state ib(freq).time, family(nbinomial) link(log) vce(cl mineid) exposure(hours) iter(50) eform

note: sp75\_1322\_ss\_1lag omitted because of collinearity

Iteration 0: log pseudolikelihood = -45227.665

Iteration 1: log pseudolikelihood = -44761.712

Iteration 2: log pseudolikelihood = -44758.16

Iteration 3: log pseudolikelihood = -44758.1

Iteration 4: log pseudolikelihood = -44758.09

Iteration 5: log pseudolikelihood = -44758.088

Iteration 6: log pseudolikelihood = -44758.087

Iteration 7: log pseudolikelihood = -44758.087

Iteration 8: log pseudolikelihood = -44758.087

Generalized linear models No. of obs = 26,110

Optimization : ML Residual df = 25,950

Scale parameter = 1

Deviance = 20480.45012 (1/df) Deviance = .7892274

Pearson = 874248.2861 (1/df) Pearson = 33.68972

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

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

AIC = 3.440681

Log pseudolikelihood = -44758.08695 BIC = -243433

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

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| Robust

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

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

sp48\_11\_ss\_1lag | .9619913 .0676209 -0.55 0.581 .8381814 1.10409

sp48\_25\_ss\_1lag | .936149 .0865595 -0.71 0.475 .7809801 1.122148

sp48\_26\_ss\_1lag | 1.079582 .1151022 0.72 0.473 .8759972 1.330481

sp48\_27\_ss\_1lag | 1.037524 .0926827 0.41 0.680 .8708826 1.236051

sp48\_28\_ss\_1lag | .9670693 .1145143 -0.28 0.777 .7667674 1.219696

sp48\_4\_ss\_1lag | .284751 .2338915 -1.53 0.126 .0569242 1.424405

sp48\_5\_ss\_1lag | 1.105869 .1486789 0.75 0.454 .8496958 1.439274

sp48\_6\_ss\_1lag | .9380903 .1427104 -0.42 0.674 .6962296 1.26397

sp48\_7\_ss\_1lag | 1.097497 .0666506 1.53 0.126 .9743394 1.236222

sp48\_8\_ss\_1lag | 1.394326 .3828073 1.21 0.226 .8140853 2.388134

sp75\_100\_ss\_1lag | .7340247 .1160605 -1.96 0.051 .5384219 1.000688

sp75\_1002\_ss\_1lag | .9337917 .0580117 -1.10 0.270 .8267405 1.054705

sp75\_1003\_ss\_1lag | .8726987 .0584713 -2.03 0.042 .7653028 .9951656

sp75\_1003\_2\_ss\_1lag | .8922493 .0770704 -1.32 0.187 .7532887 1.056844

sp75\_1311\_ss\_1lag | 1.076837 .1687116 0.47 0.637 .7921167 1.463897

sp75\_1315\_ss\_1lag | .5725346 .1397892 -2.28 0.022 .3547919 .9239103

sp75\_1316\_ss\_1lag | .8123927 .2182967 -0.77 0.439 .4797789 1.375596

sp75\_1318\_ss\_1lag | 5.44e-06 5.45e-06 -12.10 0.000 7.64e-07 .0000388

sp75\_1322\_ss\_1lag | 1 (omitted)

sp75\_1400\_ss\_1lag | 1.094019 .0827671 1.19 0.235 .9432524 1.268884

sp75\_1400\_1\_ss\_1lag | .6957051 .1618246 -1.56 0.119 .4409925 1.097537

sp75\_1403\_10\_ss\_1lag | 1.104844 .0322536 3.42 0.001 1.043402 1.169903

sp75\_1403\_5\_ss\_1lag | .9660184 .0273267 -1.22 0.222 .9139168 1.02109

sp75\_1403\_6\_ss\_1lag | .961756 .0139218 -2.69 0.007 .9348532 .989433

sp75\_1403\_7\_ss\_1lag | 1.118121 .0641097 1.95 0.052 .9992715 1.251106

sp75\_1403\_8\_ss\_1lag | .9454175 .0180582 -2.94 0.003 .9106784 .9814818

sp75\_1404\_ss\_1lag | 1.713693 .7461569 1.24 0.216 .7299824 4.023033

sp75\_1404\_1\_ss\_1lag | .7134492 .252014 -0.96 0.339 .3570181 1.425725

sp75\_1405\_ss\_1lag | .9486314 .0159649 -3.13 0.002 .9178513 .9804437

sp75\_1405\_1\_ss\_1lag | .6961094 .088927 -2.84 0.005 .5419231 .8941643

sp75\_153\_ss\_1lag | 2.053632 .1935152 7.64 0.000 1.707313 2.470199

sp75\_155\_ss\_1lag | .5436048 .0675134 -4.91 0.000 .426155 .6934241

sp75\_156\_ss\_1lag | .4343091 .0771673 -4.69 0.000 .3065906 .615232

sp75\_1719\_2\_ss\_1lag | .2272093 .0816378 -4.12 0.000 .1123528 .459482

sp75\_1719\_4\_ss\_1lag | .9266703 .1093521 -0.65 0.519 .7353243 1.167808

sp75\_1720\_ss\_1lag | 1.004731 .0422847 0.11 0.911 .9251806 1.091122

sp75\_1725\_ss\_1lag | 1.000443 .0071308 0.06 0.950 .9865644 1.014518

sp75\_1906\_ss\_1lag | 1.349213 .2508645 1.61 0.107 .9371588 1.942441

sp75\_1916\_ss\_1lag | 1.205593 .1214735 1.86 0.064 .9895435 1.468812

sp75\_203\_ss\_1lag | 1.03519 .0209195 1.71 0.087 .9949902 1.077014

sp75\_204\_ss\_1lag | 1.117372 .0386198 3.21 0.001 1.044185 1.195688

sp75\_205\_ss\_1lag | 3.019059 1.176674 2.84 0.005 1.406426 6.480762

sp75\_207\_ss\_1lag | 1.401525 .2030086 2.33 0.020 1.055129 1.861641

sp75\_208\_ss\_1lag | 1.004751 .0235105 0.20 0.839 .9597122 1.051904

sp75\_209\_ss\_1lag | 1.08156 .0998324 0.85 0.396 .9025708 1.296045

sp75\_212\_ss\_1lag | 1.064765 .0718136 0.93 0.352 .9329189 1.215243

sp75\_213\_ss\_1lag | 1.139572 .0940985 1.58 0.114 .9692933 1.339765

sp75\_215\_ss\_1lag | .5906185 .0911457 -3.41 0.001 .4364631 .7992203

sp75\_332\_ss\_1lag | .9528594 .1421104 -0.32 0.746 .7113441 1.276374

sp75\_334\_ss\_1lag | .9560806 .0443089 -0.97 0.332 .8730642 1.046991

sp75\_337\_ss\_1lag | .9455626 .0638513 -0.83 0.407 .8283444 1.079368

sp75\_340\_ss\_1lag | 1.005399 .0247895 0.22 0.827 .957968 1.055179

sp75\_343\_ss\_1lag | 1.093205 .0961508 1.01 0.311 .920102 1.298876

sp75\_373\_ss\_1lag | .0000205 .0000205 -10.77 0.000 2.87e-06 .0001461

sp75\_388\_ss\_1lag | 1.023622 .09077 0.26 0.792 .8603186 1.217924

sp75\_389\_ss\_1lag | 1.386353 .6358445 0.71 0.476 .5642531 3.406227

sp75\_500\_ss\_1lag | 1.402945 .2762878 1.72 0.086 .9536956 2.063817

sp75\_500\_1\_ss\_1lag | 1.253364 .3948526 0.72 0.473 .6759579 2.323993

sp75\_501\_ss\_1lag | .6928941 .1233479 -2.06 0.039 .4888069 .9821919

sp75\_501\_2\_ss\_1lag | .613123 .2819674 -1.06 0.287 .2489378 1.510095

sp75\_502\_ss\_1lag | .9484887 .5496114 -0.09 0.927 .3046455 2.953041

sp75\_503\_ss\_1lag | 1.017152 .0133994 1.29 0.197 .991226 1.043757

sp75\_505\_ss\_1lag | .761561 .2814086 -0.74 0.461 .3691242 1.57122

sp75\_506\_1\_ss\_1lag | .6956741 .1728296 -1.46 0.144 .4275017 1.132072

sp75\_507\_ss\_1lag | 1.127151 .0966508 1.40 0.163 .9527812 1.333431

sp75\_507\_1\_ss\_1lag | 1.024977 .0628269 0.40 0.687 .9089478 1.155818

sp75\_509\_ss\_1lag | 1.126892 .1200745 1.12 0.262 .9145 1.388612

sp75\_512\_1\_ss\_1lag | .9211595 .1483836 -0.51 0.610 .6717695 1.263134

sp75\_523\_ss\_1lag | .8732095 .0305241 -3.88 0.000 .8153868 .9351328

sp75\_523\_3\_ss\_1lag | .9900448 .0176905 -0.56 0.576 .9559722 1.025332

sp75\_524\_ss\_1lag | 1.009896 .2474807 0.04 0.968 .6247194 1.632557

sp75\_602\_ss\_1lag | .9888111 .0967568 -0.11 0.908 .8162476 1.197857

sp75\_603\_ss\_1lag | 1.06093 .0696241 0.90 0.367 .9328812 1.206556

sp75\_604\_ss\_1lag | 1.024054 .0101004 2.41 0.016 1.004447 1.044043

sp75\_605\_ss\_1lag | 1.040481 .0449553 0.92 0.358 .9559984 1.132431

sp75\_606\_ss\_1lag | 1.030837 .0240518 1.30 0.193 .9847583 1.079073

sp75\_607\_ss\_1lag | 1.029415 .0835095 0.36 0.721 .8780887 1.206821

sp75\_703\_3\_ss\_1lag | 1.232125 .1016629 2.53 0.011 1.048146 1.448397

sp75\_807\_ss\_1lag | 1.045812 .0276219 1.70 0.090 .9930517 1.101376

sp75\_810\_ss\_1lag | 1.129059 .1252532 1.09 0.274 .908422 1.403283

sp75\_811\_ss\_1lag | .8985441 .1707819 -0.56 0.574 .6190926 1.304137

sp75\_812\_ss\_1lag | .80481 .1048588 -1.67 0.096 .6234336 1.038955

sp75\_816\_ss\_1lag | 1.100767 .1240101 0.85 0.394 .8826751 1.372745

sp75\_817\_ss\_1lag | .8813781 .2699096 -0.41 0.680 .4836084 1.606315

sp75\_906\_ss\_1lag | .391462 .1055278 -3.48 0.001 .2307959 .663974

mine\_time | 1.001701 .0013418 1.27 0.204 .999075 1.004335

onsite\_insp\_hours | .9995311 .0001157 -4.05 0.000 .9993044 .9997579

|

state |

AL | 1.057285 .1066905 0.55 0.581 .8675561 1.288507

AR | 1.700922 .0747999 12.08 0.000 1.560457 1.854031

CO | .8213802 .1039823 -1.55 0.120 .6408948 1.052693

IL | 1.325401 .0810828 4.60 0.000 1.175639 1.49424

IN | 1.10708 .0938255 1.20 0.230 .9376471 1.30713

MD | 1.334872 .2466245 1.56 0.118 .9293419 1.917359

MT | .563914 .0211503 -15.27 0.000 .5239473 .6069295

NM | .7682554 .0306252 -6.61 0.000 .7105161 .8306868

OH | 1.055032 .0991858 0.57 0.569 .8774908 1.268496

OK | 1.840861 .3020036 3.72 0.000 1.334679 2.539016

PA | 1.358384 .1013962 4.10 0.000 1.173505 1.57239

TN | 1.785227 .1834491 5.64 0.000 1.459568 2.183547

UT | .5294855 .0988909 -3.40 0.001 .3671783 .7635388

VA | .9495421 .0489563 -1.00 0.315 .8582783 1.05051

WV | 1.306553 .0581348 6.01 0.000 1.197438 1.425611

WY | .761949 .0299999 -6.91 0.000 .7053618 .8230759

|

time |

2000.25 | .9998649 .0747935 -0.00 0.999 .863512 1.157749

2000.5 | 1.05915 .07556 0.81 0.421 .920943 1.218099

2000.75 | .7256641 .0534219 -4.36 0.000 .6281624 .8382998

2001 | .7341774 .0538172 -4.22 0.000 .6359246 .8476107

2001.25 | .8554575 .0594688 -2.25 0.025 .7464925 .980328

2001.75 | .7806975 .0500773 -3.86 0.000 .6884669 .8852838

2002 | .8760656 .0987177 -1.17 0.240 .7024585 1.092578

2002.25 | .8337033 .0603328 -2.51 0.012 .7234565 .9607506

2002.5 | .9150757 .0648882 -1.25 0.211 .7963393 1.051516

2002.75 | .7096549 .0517625 -4.70 0.000 .6151206 .8187178

2003 | .7130775 .0581938 -4.14 0.000 .607674 .8367636

2003.25 | .7704389 .071873 -2.80 0.005 .6416984 .9250079

2003.5 | .8600191 .066231 -1.96 0.050 .7395306 1.000138

2003.75 | .6116418 .0470403 -6.39 0.000 .5260569 .7111506

2004 | .6414212 .0523126 -5.44 0.000 .5466654 .7526015

2004.25 | .6768395 .0533844 -4.95 0.000 .5798943 .7899918

2004.5 | .7431113 .0561249 -3.93 0.000 .6408632 .8616729

2004.75 | .5727215 .0440701 -7.24 0.000 .4925436 .665951

2005 | .5960298 .0480663 -6.42 0.000 .5088896 .6980916

2005.25 | .6342471 .0472101 -6.12 0.000 .5481499 .7338675

2005.5 | .6877731 .0521895 -4.93 0.000 .5927267 .7980608

2005.75 | .5540329 .0450234 -7.27 0.000 .4724576 .6496931

2006 | .6229559 .0528104 -5.58 0.000 .5275913 .7355582

2006.25 | .6011967 .0489524 -6.25 0.000 .5125162 .7052216

2006.5 | .6838944 .0537701 -4.83 0.000 .5862255 .7978355

2006.75 | .5613806 .0470972 -6.88 0.000 .4762616 .6617124

2007 | .5297875 .0429978 -7.83 0.000 .4518745 .6211344

2007.25 | .5912276 .0516789 -6.01 0.000 .4981402 .7017102

2007.5 | .7013785 .0684138 -3.64 0.000 .5793281 .849142

2007.75 | .5559603 .0478778 -6.82 0.000 .4696135 .6581834

2008 | .5255838 .0427988 -7.90 0.000 .4480514 .6165327

2008.25 | .5283397 .0449762 -7.49 0.000 .4471493 .6242721

2008.5 | .5682786 .0494715 -6.49 0.000 .4791373 .6740043

2008.75 | .4650148 .0402219 -8.85 0.000 .3925015 .5509247

2009 | .4860916 .0408086 -8.59 0.000 .4123421 .5730316

2009.25 | .4704717 .0422551 -8.40 0.000 .3945331 .5610267

2009.5 | .5266726 .0468556 -7.21 0.000 .4423982 .6270008

2009.75 | .4486291 .0392867 -9.15 0.000 .3778743 .5326324

2010 | .4457689 .0397105 -9.07 0.000 .3743537 .530808

2010.25 | .4464046 .0453333 -7.94 0.000 .3658368 .5447156

2010.5 | .5766127 .0484443 -6.55 0.000 .489069 .6798267

2010.75 | .4505334 .0415848 -8.64 0.000 .375976 .5398758

2011 | .4460136 .0399648 -9.01 0.000 .3741767 .5316423

2011.25 | .4302926 .0371106 -9.78 0.000 .3633724 .509537

2011.5 | .4864632 .0402943 -8.70 0.000 .4135651 .5722107

2011.75 | .3785183 .032581 -11.29 0.000 .3197566 .4480786

2012 | .424273 .0384157 -9.47 0.000 .3552822 .5066607

2012.25 | .3689934 .0321442 -11.44 0.000 .3110769 .4376928

2012.5 | .4275691 .041421 -8.77 0.000 .3536273 .5169719

2012.75 | .3201213 .031339 -11.64 0.000 .2642313 .3878331

2013 | .3788911 .0380127 -9.67 0.000 .3112551 .4612245

2013.25 | .3539863 .0334743 -10.98 0.000 .294099 .4260685

2013.5 | .4131664 .0402918 -9.06 0.000 .3412842 .5001886

2013.75 | .3111975 .0312599 -11.62 0.000 .2555834 .3789131

2014 | .350292 .0342825 -10.72 0.000 .2891509 .4243615

2014.25 | .3646705 .0371243 -9.91 0.000 .2987077 .4451996

2014.5 | .3857916 .0381539 -9.63 0.000 .3178124 .4683113

2014.75 | .3848859 .0391787 -9.38 0.000 .3152722 .4698708

2015 | .3360764 .0336307 -10.90 0.000 .2762227 .4088995

2015.25 | .3246447 .0327323 -11.16 0.000 .2664317 .3955768

2015.5 | .4203173 .0420944 -8.65 0.000 .3454064 .5114749

2015.75 | .3347428 .0366432 -10.00 0.000 .2701053 .4148484

2016 | .3433021 .0392441 -9.35 0.000 .2743927 .429517

|

\_cons | .0001015 6.39e-06 -146.02 0.000 .0000897 .0001149

ln(hours) | 1 (exposure)

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

.

. pause "next"

.

. eststo clear

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

note: sp75\_1322\_ss\_1lag omitted because of collinearity

Fitting Poisson model:

Iteration 0: log pseudolikelihood = -63411.852

Iteration 1: log pseudolikelihood = -48557.896

Iteration 2: log pseudolikelihood = -46922.991

Iteration 3: log pseudolikelihood = -46733.395

Iteration 4: log pseudolikelihood = -46724.654

Iteration 5: log pseudolikelihood = -46724.63

Iteration 6: log pseudolikelihood = -46724.63

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 = -43804.983

Iteration 1: log pseudolikelihood = -43562.024

Iteration 2: log pseudolikelihood = -43556.297

Iteration 3: log pseudolikelihood = -43556.293

Negative binomial regression Number of obs = 26,110

Wald chi2(159) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -43556.293 Pseudo R2 = 0.0365

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

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

| Robust

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

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

sp48\_11\_ss\_1lag | .9517017 .055116 -0.85 0.393 .8495816 1.066097

sp48\_25\_ss\_1lag | .9353131 .0829712 -0.75 0.451 .7860448 1.112927

sp48\_26\_ss\_1lag | 1.077779 .1084026 0.74 0.456 .8849444 1.312632

sp48\_27\_ss\_1lag | 1.048033 .0880629 0.56 0.577 .8888965 1.235659

sp48\_28\_ss\_1lag | .9342041 .0844791 -0.75 0.452 .7824715 1.11536

sp48\_4\_ss\_1lag | .288155 .2357023 -1.52 0.128 .057992 1.431805

sp48\_5\_ss\_1lag | 1.05455 .149605 0.37 0.708 .7985657 1.392592

sp48\_6\_ss\_1lag | .9373142 .09948 -0.61 0.542 .7612803 1.154053

sp48\_7\_ss\_1lag | 1.088057 .0556349 1.65 0.099 .9843008 1.202751

sp48\_8\_ss\_1lag | 1.237269 .2816568 0.94 0.350 .7919422 1.933014

sp75\_100\_ss\_1lag | .766855 .106461 -1.91 0.056 .5841745 1.006662

sp75\_1002\_ss\_1lag | .9333938 .0505464 -1.27 0.203 .8394011 1.037911

sp75\_1003\_ss\_1lag | .884318 .0548794 -1.98 0.048 .7830404 .9986947

sp75\_1003\_2\_ss\_1lag | .8897426 .0755336 -1.38 0.169 .7533602 1.050814

sp75\_1311\_ss\_1lag | 1.088268 .1244455 0.74 0.459 .8697595 1.361671

sp75\_1315\_ss\_1lag | .6038637 .1312956 -2.32 0.020 .3943353 .9247242

sp75\_1316\_ss\_1lag | .8172583 .1464564 -1.13 0.260 .5752017 1.161177

sp75\_1318\_ss\_1lag | 6.97e-08 6.99e-08 -16.45 0.000 9.79e-09 4.97e-07

sp75\_1322\_ss\_1lag | 1 (omitted)

sp75\_1400\_ss\_1lag | 1.084303 .0767621 1.14 0.253 .943823 1.245691

sp75\_1400\_1\_ss\_1lag | .7009469 .1715117 -1.45 0.146 .4339186 1.132301

sp75\_1403\_10\_ss\_1lag | 1.090347 .0259389 3.64 0.000 1.040675 1.142391

sp75\_1403\_5\_ss\_1lag | .9628028 .0244374 -1.49 0.135 .9160782 1.011911

sp75\_1403\_6\_ss\_1lag | .9648686 .013284 -2.60 0.009 .9391806 .9912592

sp75\_1403\_7\_ss\_1lag | 1.133703 .0625942 2.27 0.023 1.017426 1.26327

sp75\_1403\_8\_ss\_1lag | .9475535 .0165263 -3.09 0.002 .91571 .9805045

sp75\_1404\_ss\_1lag | 1.595295 .6664696 1.12 0.264 .7034497 3.617839

sp75\_1404\_1\_ss\_1lag | .7223465 .2506319 -0.94 0.349 .3659359 1.42589

sp75\_1405\_ss\_1lag | .9508743 .0135522 -3.53 0.000 .92468 .9778107

sp75\_1405\_1\_ss\_1lag | .7208051 .0732457 -3.22 0.001 .5906384 .8796584

sp75\_153\_ss\_1lag | 2.08004 .1846498 8.25 0.000 1.747868 2.475339

sp75\_155\_ss\_1lag | .5438977 .0605558 -5.47 0.000 .4372676 .6765301

sp75\_156\_ss\_1lag | .4432818 .0770714 -4.68 0.000 .315272 .6232675

sp75\_1719\_2\_ss\_1lag | .2459385 .0672315 -5.13 0.000 .143925 .4202589

sp75\_1719\_4\_ss\_1lag | .9263141 .10719 -0.66 0.508 .7383462 1.162135

sp75\_1720\_ss\_1lag | 1.009823 .039967 0.25 0.805 .93445 1.091275

sp75\_1725\_ss\_1lag | .9952608 .0061532 -0.77 0.442 .9832735 1.007394

sp75\_1906\_ss\_1lag | 1.369963 .2381259 1.81 0.070 .9744371 1.926035

sp75\_1916\_ss\_1lag | 1.191026 .11124 1.87 0.061 .9917918 1.430284

sp75\_203\_ss\_1lag | 1.037599 .0202155 1.89 0.058 .9987243 1.077987

sp75\_204\_ss\_1lag | 1.112141 .0379336 3.12 0.002 1.040224 1.189031

sp75\_205\_ss\_1lag | 2.657728 1.317892 1.97 0.049 1.005597 7.024204

sp75\_207\_ss\_1lag | 1.456868 .2113915 2.59 0.010 1.096253 1.936107

sp75\_208\_ss\_1lag | 1.01931 .021964 0.89 0.375 .9771579 1.063281

sp75\_209\_ss\_1lag | 1.064708 .088429 0.75 0.450 .9047616 1.25293

sp75\_212\_ss\_1lag | 1.075443 .0696144 1.12 0.261 .9473021 1.220918

sp75\_213\_ss\_1lag | 1.155138 .05673 2.94 0.003 1.049133 1.271854

sp75\_215\_ss\_1lag | .6608683 .0834145 -3.28 0.001 .516032 .8463562

sp75\_332\_ss\_1lag | .9911906 .1460513 -0.06 0.952 .7425627 1.323065

sp75\_334\_ss\_1lag | .9661457 .0418637 -0.79 0.427 .8874819 1.051782

sp75\_337\_ss\_1lag | .9456793 .0597923 -0.88 0.377 .835459 1.070441

sp75\_340\_ss\_1lag | 1.004818 .0218942 0.22 0.825 .9628093 1.048659

sp75\_343\_ss\_1lag | 1.112184 .0952722 1.24 0.215 .9402878 1.315505

sp75\_373\_ss\_1lag | 2.73e-07 2.74e-07 -15.08 0.000 3.83e-08 1.95e-06

sp75\_388\_ss\_1lag | 1.020043 .0810994 0.25 0.803 .8728571 1.192049

sp75\_389\_ss\_1lag | 1.409453 .5852342 0.83 0.408 .6246176 3.18044

sp75\_500\_ss\_1lag | 1.206976 .1959814 1.16 0.247 .8779824 1.659249

sp75\_500\_1\_ss\_1lag | 1.244246 .3870531 0.70 0.482 .6762683 2.28925

sp75\_501\_ss\_1lag | .7216092 .1165156 -2.02 0.043 .5258497 .9902444

sp75\_501\_2\_ss\_1lag | .6224493 .2798715 -1.05 0.292 .2578569 1.502551

sp75\_502\_ss\_1lag | .8516124 .3223076 -0.42 0.671 .4055924 1.78811

sp75\_503\_ss\_1lag | 1.012122 .0096666 1.26 0.207 .9933522 1.031247

sp75\_505\_ss\_1lag | .7109724 .1931147 -1.26 0.209 .4174927 1.210756

sp75\_506\_1\_ss\_1lag | .7420805 .1791081 -1.24 0.216 .4623869 1.190958

sp75\_507\_ss\_1lag | 1.113603 .090933 1.32 0.188 .9489082 1.306883

sp75\_507\_1\_ss\_1lag | 1.027232 .0563194 0.49 0.624 .9225718 1.143765

sp75\_509\_ss\_1lag | 1.203394 .1245749 1.79 0.074 .9824078 1.47409

sp75\_512\_1\_ss\_1lag | 1.018134 .1343313 0.14 0.892 .7861372 1.318595

sp75\_523\_ss\_1lag | .8861446 .0287807 -3.72 0.000 .8314933 .944388

sp75\_523\_3\_ss\_1lag | .9832583 .0160947 -1.03 0.302 .9522138 1.015315

sp75\_524\_ss\_1lag | 1.118202 .2415792 0.52 0.605 .7321909 1.707717

sp75\_602\_ss\_1lag | .9695975 .0661249 -0.45 0.651 .8482835 1.108261

sp75\_603\_ss\_1lag | 1.065806 .0591585 1.15 0.251 .955942 1.188297

sp75\_604\_ss\_1lag | 1.025448 .0093847 2.75 0.006 1.007218 1.044008

sp75\_605\_ss\_1lag | 1.022221 .0375563 0.60 0.550 .9511996 1.098545

sp75\_606\_ss\_1lag | 1.031669 .0232768 1.38 0.167 .9870418 1.078315

sp75\_607\_ss\_1lag | 1.026697 .0849133 0.32 0.750 .873059 1.207373

sp75\_703\_3\_ss\_1lag | 1.216585 .0830307 2.87 0.004 1.064263 1.390708

sp75\_807\_ss\_1lag | 1.046375 .0235638 2.01 0.044 1.001195 1.093593

sp75\_810\_ss\_1lag | 1.154565 .1263441 1.31 0.189 .9316899 1.430755

sp75\_811\_ss\_1lag | .9307607 .1663988 -0.40 0.688 .6556357 1.321337

sp75\_812\_ss\_1lag | .8463276 .1101245 -1.28 0.200 .6558126 1.092188

sp75\_816\_ss\_1lag | 1.101921 .1078839 0.99 0.322 .9095223 1.33502

sp75\_817\_ss\_1lag | .8359356 .2197322 -0.68 0.495 .4993762 1.399322

sp75\_906\_ss\_1lag | .3885275 .1113525 -3.30 0.001 .2215473 .681361

mine\_time | 1.001498 .0013102 1.14 0.252 .9989335 1.00407

onsite\_insp\_hours | .9995457 .0001117 -4.07 0.000 .9993269 .9997646

|

state |

AL | 1.050441 .0955862 0.54 0.589 .878852 1.255533

AR | 1.773374 .075865 13.39 0.000 1.630745 1.928479

CO | .7735019 .0931709 -2.13 0.033 .6108454 .9794708

IL | 1.304763 .0760271 4.57 0.000 1.163946 1.462615

IN | 1.107171 .098969 1.14 0.255 .9292367 1.319176

MD | 1.271839 .1950883 1.57 0.117 .9415988 1.717903

MT | .5471574 .0211181 -15.62 0.000 .5072934 .5901539

NM | .7623691 .0297083 -6.96 0.000 .7063099 .8228777

OH | 1.070362 .0944994 0.77 0.441 .9002854 1.272567

OK | 1.813908 .2956953 3.65 0.000 1.31782 2.496746

PA | 1.30357 .1025774 3.37 0.001 1.117259 1.520951

TN | 1.710674 .1681589 5.46 0.000 1.410894 2.07415

UT | .4976114 .0852164 -4.08 0.000 .3557306 .6960803

VA | .9357706 .0504275 -1.23 0.218 .841975 1.040015

WV | 1.248053 .0553298 5.00 0.000 1.144187 1.361349

WY | .7564669 .0290359 -7.27 0.000 .7016457 .8155715

|

time |

2000.25 | .9823281 .0636576 -0.28 0.783 .8651598 1.115364

2000.5 | 1.062089 .0650322 0.98 0.325 .9419792 1.197513

2000.75 | .7525689 .0494568 -4.33 0.000 .6616184 .8560221

2001 | .7404664 .0468781 -4.75 0.000 .6540587 .8382894

2001.25 | .8559279 .0489889 -2.72 0.007 .7651009 .9575371

2001.75 | .7740528 .0437079 -4.54 0.000 .6929572 .8646389

2002 | .8437171 .0658066 -2.18 0.029 .7241133 .9830763

2002.25 | .827671 .0526654 -2.97 0.003 .730626 .937606

2002.5 | .9035344 .0568871 -1.61 0.107 .7986427 1.022202

2002.75 | .7380511 .0459393 -4.88 0.000 .6532872 .8338131

2003 | .706131 .0495887 -4.95 0.000 .6153312 .8103295

2003.25 | .7473288 .0543415 -4.01 0.000 .648063 .8617995

2003.5 | .8454231 .0547508 -2.59 0.010 .7446447 .9598407

2003.75 | .6246036 .0418825 -7.02 0.000 .5476808 .7123304

2004 | .6515554 .046978 -5.94 0.000 .5656902 .750454

2004.25 | .6945343 .0472483 -5.36 0.000 .6078376 .7935966

2004.5 | .767864 .0505292 -4.01 0.000 .6749492 .8735698

2004.75 | .5944879 .0410509 -7.53 0.000 .5192367 .6806451

2005 | .6009914 .0427373 -7.16 0.000 .5228031 .6908732

2005.25 | .6490109 .0436174 -6.43 0.000 .5689135 .7403852

2005.5 | .7048463 .048153 -5.12 0.000 .616514 .8058347

2005.75 | .5778854 .0427072 -7.42 0.000 .4999605 .6679558

2006 | .62267 .0467024 -6.32 0.000 .537545 .7212753

2006.25 | .6097961 .044398 -6.79 0.000 .5287014 .7033296

2006.5 | .705943 .0505578 -4.86 0.000 .6134918 .8123263

2006.75 | .5680672 .0428142 -7.50 0.000 .4900566 .6584962

2007 | .5516708 .040745 -8.05 0.000 .477323 .637599

2007.25 | .6031051 .0496277 -6.15 0.000 .5132751 .7086566

2007.5 | .706012 .0581423 -4.23 0.000 .6007765 .8296811

2007.75 | .5736233 .0433148 -7.36 0.000 .4947113 .6651227

2008 | .5378422 .038302 -8.71 0.000 .4677752 .6184043

2008.25 | .5370028 .0407203 -8.20 0.000 .4628401 .6230489

2008.5 | .5952549 .0475919 -6.49 0.000 .5089177 .6962391

2008.75 | .4858231 .0382877 -9.16 0.000 .416289 .5669717

2009 | .4950386 .0368412 -9.45 0.000 .4278505 .5727778

2009.25 | .4749468 .0386438 -9.15 0.000 .404937 .5570606

2009.5 | .5349999 .0425339 -7.87 0.000 .4578054 .6252107

2009.75 | .4582332 .0358825 -9.97 0.000 .3930358 .5342456

2010 | .4558875 .0380346 -9.42 0.000 .3871169 .5368751

2010.25 | .4592523 .0432785 -8.26 0.000 .3818008 .5524155

2010.5 | .5742638 .0433272 -7.35 0.000 .4953245 .6657836

2010.75 | .4526817 .0370313 -9.69 0.000 .3856213 .5314041

2011 | .4507122 .0360064 -9.98 0.000 .3853884 .5271084

2011.25 | .4321015 .0333498 -10.87 0.000 .3714409 .5026688

2011.5 | .4954198 .0370457 -9.39 0.000 .4278816 .5736185

2011.75 | .3820935 .0296262 -12.41 0.000 .3282242 .4448041

2012 | .4243484 .0340332 -10.69 0.000 .3626229 .4965808

2012.25 | .3699633 .0288778 -12.74 0.000 .3174807 .4311216

2012.5 | .4265184 .0366457 -9.92 0.000 .360416 .5047443

2012.75 | .3284515 .029044 -12.59 0.000 .2761863 .3906074

2013 | .3752599 .0328601 -11.19 0.000 .316079 .4455215

2013.25 | .3598484 .0311428 -11.81 0.000 .3037057 .4263695

2013.5 | .4138532 .0369946 -9.87 0.000 .3473416 .4931009

2013.75 | .3170266 .0295552 -12.32 0.000 .2640836 .3805837

2014 | .3558424 .0325698 -11.29 0.000 .297405 .4257622

2014.25 | .370099 .034804 -10.57 0.000 .3078019 .4450047

2014.5 | .3954396 .0358103 -10.24 0.000 .3311288 .4722407

2014.75 | .3822248 .0353843 -10.39 0.000 .3188008 .4582668

2015 | .3450373 .032476 -11.31 0.000 .2869116 .4149386

2015.25 | .3279704 .0309487 -11.81 0.000 .2725911 .3946005

2015.5 | .4313855 .0403017 -9.00 0.000 .3592055 .5180696

2015.75 | .3329342 .0344916 -10.62 0.000 .2717534 .4078888

2016 | .3551845 .0382837 -9.60 0.000 .2875457 .4387338

|

\_cons | .0001016 5.74e-06 -162.58 0.000 .0000909 .0001135

ln(hours) | 1 (exposure)

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

/lnalpha | -1.052408 .066775 -1.183285 -.9215314

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

alpha | .3490961 .0233109 .3062711 .3979092

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

(est1 stored)

. esttab using `"`directory'Model.`injury\_label'.`time\_label'.`violation\_level\_label'.C.SSV.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.SP.C.SSV.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.SP.C.SSV.2.csv)

. est store nbin

.

. pause "next"

.

. // test for over-dispersion

. lrtest pois nbin, stats force

Likelihood-ratio test LR chi2(3) = -6336.67

(Assumption: nbin nested in pois) Prob > chi2 = 1.0000

Akaike's information criterion and Bayesian information criterion

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

Model | Obs ll(null) ll(model) df AIC BIC

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

nbin | 26,110 -45205.22 -43556.29 161 87434.59 88749.97

pois | 26,110 -51293.53 -46724.63 164 93777.26 95117.15

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

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

.

. pause "next"

.

. // final model + diagnostics/assessment

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

. predict cssv2\_yhat

(option n assumed; predicted number of events)

(4,179 missing values generated)

. gen cssv2\_res = dv - cssv2\_yhat

(4,179 missing values generated)

.

. summ dv cssv2\_yhat

Variable | Obs Mean Std. Dev. Min Max

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

dv | 30,289 2.177721 3.851734 0 71

cssv2\_yhat | 26,110 2.547378 3.714304 4.05e-08 61.15071

. /\*

> pause "next"

>

> scatter dv cssv2\_yhat

>

> pause "next"

>

> scatter cssv2\_res dv

>

> pause "next"

>

> scatter cssv2\_res cssv2\_yhat

> \*/

. pause "complete: C.SSV.2"

.