| **MODEL** | **ASSESSMENT** |
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| *MR.Y.C.SP.V.1*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # violations  No lag  *poisson run (bad fit, overdispersed)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Overdispersed (lrtest)  Alpha 0.1338 (0.09907 - 0.1806)  Log pseudo-likelihood -8461.7354 (+1107.8870)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.9050 2.9735 6.10e-11 53.4817 |
| *MR.Y.C.SP.SSV.1*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # sig&sub violations  No lag  *poisson run (bad fit, overdispersed)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Overdispersed (lrtest)  Alpha 0.1516 (0.1162 - 0.1978)  Log pseudo-likelihood -8487.2093 (+1082.4130)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.9039 2.9211 5.54e-11 44.1580 |
| *MR.Y.C.SP.PP.1*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # penalty points  No lag  *poisson run (bad fit)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Not overdispersed (lrtest)  Alpha 0.0548 (0.0205 - 0.1467)  Log pseudo-likelihood -4355.8052 (+5213.8170)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.8994 2.8809 4.83e-16 38.7538 |
| *MR.Q.C.SP.V.1*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # violations  No lag  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Overdispersed (lrtest)  Alpha 0.1726 (0.1253 - 0.2378)  Log pseudo-likelihood -19142.1270 (+902.8670)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.4394 0.7079 3.12e-13 13.6984 |
| *MR.Q.C.SP.SSV.1*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # sig&sub violations  No lag  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Overdispersed (lrtest)  Alpha 0.1901 (0.1404 - 0.2574)  Log pseudo-likelihood -19189.3850 (+855.6090)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.4392 0.6984 1.10e-12 23.3748 |
| *MR.Q.C.SP.PP.1*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # penalty points  No lag  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Overdispersed (lrtest)  Alpha 0.1045 (0.0544 - 0.2007)  Log pseudo-likelihood -9783.9224 (+10261.0700)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.4389 0.6952 0 13.2289 |
| *MR.Y.C.SP.V.2*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # violations  Lag 1  *poisson run (bad fit, overdispersed)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Overdispersed (lrtest)  Alpha 0.1412 (0.1056 - 0.1888)  Log pseudo-likelihood -8474.5991 (+1095.0230)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.9107 3.0223 2.41e-10 52.4850 |
| *MR.Y.C.SP.SSV.2*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # sig&sub violations  Lag 1  *poisson run (bad fit)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Not overdispersed (lrtest)  Alpha 0.1503 (0.1152 - 0.1962)  Log pseudo-likelihood -8490.7808 (+1078.8410)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.9035 2.9085 1.28e-11 43.2587 |
| *MR.Y.C.SP.PP.2*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # penalty points  Lag 1  *poisson run (bad fit)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Not overdispersed (lrtest)  Alpha 0.0763 (0.03953 - 0.1473)  Log pseudo-likelihood -4375.8603 (+5193.7620)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.9004 2.8803 1.30e-09 38.5302 |
| *MR.Q.C.SP.V.2*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # violations  Lag 1  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Overdispersed (lrtest)  Alpha 0.1758 (0.1288 - 0.2399)  Log pseudo-likelihood -18378.5450 (+1666.4490)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.4628 0.7212 9.05e-22 13.2743 |
| *MR.Q.C.SP.SSV.2*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # sig&sub violations  Lag 1  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Overdispersed (lrtest)  Alpha 0.1818 (0.1316 - 0.2512)  Log pseudo-likelihood -18414.1000 (+1630.8940)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.4622 0.7084 3.11e-23 14.7828 |
| *MR.Q.C.SP.PP.2*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # penalty points  Lag 1  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Not overdispersed (lrtest)  Alpha 0.1244 (0.0730 - 0.2120)  Log pseudo-likelihood -9681.5311 (+10363.4600)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.4625 0.7075 5.53e-37 10.5460 |
| *MR.Y.C.SP.V.3*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # violations  Cumulative Lag 4  *poisson run (bad fit, overdispersed)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Overdispersed (lrtest)  Alpha 0.1351 (0.1006 - 0.1815)  Log pseudo-likelihood -8466.9633 (+1095.0230)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.9056 2.9784 3.64e-10 46.1858 |
| *MR.Y.C.SP.SSV.3*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # sig&sub violations  Cumulative Lag 4  *poisson run (bad fit, overdispersed)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Overdispersed (lrtest)  Alpha 0.1443 (0.1093 - 0.1904)  Log pseudo-likelihood -8482.8577 (+1078.8410)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.9003 2.8905 3.55e-25 33.5314 |
| *MR.Y.C.SP.PP.3*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # penalty points  Cumulative Lag 4  *poisson run (bad fit)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Not overdispersed (lrtest)  Alpha 0.0706 (0.03357 - 0.1484)  Log pseudo-likelihood -4370.8536 (+5193.7620)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.9005 2.8844 1.88e-09 36.1449 |
| *MR.Q.C.SP.V.3*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # violations  Cumulative Lag 4  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Overdispersed (lrtest)  Alpha 0.1353 (0.0912 - 0.2006)  Log pseudo-likelihood -16426.4810 (+3618.5130)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.4956 0.7572 2.62e-11 14.6855 |
| *MR.Q.C.SP.SSV.3*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # sig&sub violations  Cumulative Lag 4  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Overdispersed (lrtest)  Alpha 0.1382 (0.0897 - 0.2128)  Log pseudo-likelihood -16428.9010 (+3616.0930)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.4948 0.7402 3.03e-11 11.8285 |
| *MR.Q.C.SP.PP.3*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # penalty points  Cumulative Lag 4  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Not overdispersed (lrtest)  Alpha 0.0669 (0.0275 - 0.1629)  Log pseudo-likelihood -9135.7934 (+10909.2000)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.4949 0.7415 1.47e-23 11.3621 |
| *MR.Y.C.SP.V.4*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # violations  Cumulative Lag From T=0  *poisson run (bad fit, overdispersed)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Overdispersed (lrtest)  Alpha 0.0700 (0.0410 - 0.1197)  Log pseudo-likelihood -8318.2714 (+1251.3510)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.8870 2.9296 0.0006 40.1506 |
| *MR.Y.C.SP.SSV.4*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # sig&sub violations  Cumulative Lag From T=0  *poisson run (bad fit, overdispersed)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (lrtest yeilds no p-value)  Alpha 0.0897 (0.0606 - 0.1326)  Log pseudo-likelihood -8366.4712 (+1203.1510)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.8935 2.9611 6.58e-34 44.7704 |
| *MR.Y.C.SP.PP.4*  MR injury outcome  Mine-year unit  Count outcome variable  Subpart-level violation predictors  Predictors = # penalty points  Cumulative Lag From T=0  *poisson run (bad fit, overdispersed)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Overdispersed (lrtest)  Alpha 4.17e-08 (2.13e-08 - 8.16e-08)  Log pseudo-likelihood -4231.7704 (+5337.8520)  Mean SD Min Max  True 1.8810 3.2689 0 37  Predicted 1.8882 2.9517 0.0005 44.6661 |
| *MR.Q.C.SP.V.4*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # violations  Cumulative Lag From T=0  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Not overdispersed (lrtest)  Alpha 0.01623 (0.0025 - 0.1046)  Log pseudo-likelihood -11179.4690 (+8865.5250)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.6445 0.9308 1.99e-10 12.3682 |
| *MR.Q.C.SP.SSV.4*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # sig&sub violations  Cumulative Lag From T=0  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg results reported* | Red flag (deviance and Pearson goodness of fit tests disagree)  Red flag (lrtest yields no p-value)  Alpha 0.0326 (0.0118 - 0.0904)  Log pseudo-likelihood -11227.1190 (+8817.8750)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.6448 0.9290 6.96e-14 11.0426 |
| *MR.Q.C.SP.PP.4*  MR injury outcome  Mine-quarter unit  Count outcome variable  Subpart-level violation predictors  Predictors = # penalty points  Cumulative Lag From T=0  *poisson run (deviance and Pearson goodness of fit tests disagree)*  *nbreg - GLM run (inferior log likelihood)*  *nbreg convergence not achieved* | Red flag (deviance and Pearson goodness of fit tests disagree)  Not overdispersed (lrtest)  Alpha 8.47e-09 (NA – NA)  Log pseudo-likelihood -5717.8818 (+14327.1100)  Mean SD Min Max  True 0.4096 0.9551 0 14  Predicted 0.6446 0.9239 1.44e-13 11.3215 |