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| **Supplemental Digital Content 1. Co-Positivity Analysis – Analysis of Deviance Results for Nine Independent Logistic Regression Models** | | | | | | | | | |
| Parameter | Benzodiazepines | Buprenorphine | Cocaine | Alcohol | Fentanyl | Heroin | Methadone | Other Opioids | THC |
| Client Specialty Group | ChiSq=23975.71 df=5 pval= 0.00e+00 | ChiSq=25938.2 df=5 pval= 0.00e+00 | ChiSq=17219.81 df=5 pval= 0.00e+00 | ChiSq=7068.33 df=5 pval=0.00e+00 | ChiSq=8565.01 df=5 pval= 0.00e+00 | ChiSq=8965.84 df=5 pval= 0.00e+00 | ChiSq=2792.86 df=5 pval= 0.00e+00 | ChiSq=34203.367313 df=5 pval= 0.00e+00 | ChiSq=5181.79 df=5 pval= 0.00e+00 |
| Discrete Age | ChiSq=4597.45 df=5 pval= 0.00e+00 | ChiSq=16904.98 df=5 pval= 0.00e+00 | ChiSq=6973.8 df=5 pval= 0.00e+00 | ChiSq=7876.74 df=5 pval=0.00e+00 | ChiSq=2159.81 df=5 pval= 0.00e+00 | ChiSq=7204.55 df=5 pval= 0.00e+00 | ChiSq=2668.62 df=5 pval= 0.00e+00 | ChiSq=732.60127 df=5 pval=4.38e-156 | ChiSq=46288.63 df=5 pval= 0.00e+00 |
| Methamphetamine | ChiSq=22406924.44 df=1 pval= 0.00e+00 | ChiSq=6825999.75 df=1 pval= 0.00e+00 | ChiSq=12865432.72 df=1 pval= 0.00e+00 | ChiSq=21.15 df=1 pval=4.25e-06 | ChiSq=3474837.81 df=1 pval= 0.00e+00 | ChiSq=4911252.27 df=1 pval= 0.00e+00 | ChiSq=57.35 df=1 pval= 3.65e-14 | ChiSq=27667513.118976 df=1 pval= 0.00e+00 | ChiSq=34213260.47 df=1 pval= 0.00e+00 |
| Regions | ChiSq=2125.1 df=8 pval= 0.00e+00 | ChiSq=4521.26 df=8 pval= 0.00e+00 | ChiSq=6861.32 df=8 pval= 0.00e+00 | ChiSq=382.67 df=8 pval=9.49e-78 | ChiSq=5379744.89 df=8 pval= 0.00e+00 | ChiSq=3089.73 df=8 pval= 0.00e+00 | ChiSq=693.01 df=8 pval=2.29e-144 | ChiSq=2063.588039 df=8 pval= 0.00e+00 | ChiSq=878.71 df=8 pval=2.21e-184 |
| Regions:Methamphetamine | ChiSq=713.7 df=8 pval=8.04e-149 | ChiSq=196.47 df=8 pval= 3.53e-38 | ChiSq=148.58 df=8 pval= 3.88e-28 | ChiSq=114.88 df=8 pval=3.77e-21 | ChiSq=313.49 df=8 pval= 5.51e-63 | ChiSq=1957.69 df=8 pval= 0.00e+00 | ChiSq=141.2 df=8 pval= 1.33e-26 | ChiSq=1173.445813 df=8 pval=5.23e-248 | ChiSq=669.41 df=8 pval=2.75e-139 |
| Gender | ChiSq=4475.41 df=1 pval= 0.00e+00 | ChiSq=265.52 df=1 pval= 1.07e-59 | ChiSq=1267.31 df=1 pval=1.44e-277 | ChiSq=6002.11 df=1 pval=0.00e+00 | ChiSq=10.51 df=1 pval= 1.19e-03 | ChiSq=409.93 df=1 pval= 3.80e-91 | ChiSq=22.72 df=1 pval= 1.87e-06 | ChiSq=0.006473 df=1 pval= 9.36e-01 | ChiSq=10830.03 df=1 pval= 0.00e+00 |
| Year Collected | ChiSq=669.11 df=5 pval=2.34e-142 | ChiSq=30.62 df=5 pval= 1.11e-05 | ChiSq=33.94 df=5 pval= 2.45e-06 | ChiSq=19.7 df=5 pval=1.42e-03 | ChiSq=1076.06 df=5 pval=2.04e-230 | ChiSq=101.88 df=5 pval= 2.12e-20 | ChiSq=57.91 df=5 pval= 3.29e-11 | ChiSq=662.609443 df=5 pval=5.95e-141 | ChiSq=134.71 df=5 pval= 2.38e-27 |
| Year Collected:  Methamphetamine | ChiSq=15.65 df=5 pval= 7.91e-03 | ChiSq=22.35 df=5 pval= 4.49e-04 | ChiSq=22.45 df=5 pval= 4.30e-04 | ChiSq=11.9 df=5 pval=3.62e-02 | ChiSq=250.77 df=5 pval= 3.76e-52 | ChiSq=65.06 df=5 pval= 1.09e-12 | ChiSq=7.19 df=5 pval= 2.07e-01 | ChiSq=38.011481 df=5 pval= 3.75e-07 | ChiSq=11.27 df=5 pval= 4.63e-02 |
| Year Collected: Regions | ChiSq=568.62 df=40 pval= 1.24e-94 | ChiSq=1016.41 df=40 pval=4.31e-187 | ChiSq=268.9 df=40 pval= 1.08e-35 | ChiSq=129.79 df=40 pval=2.04e-11 | ChiSq=686.11 df=40 pval=1.33e-118 | ChiSq=1192.06 df=40 pval=6.41e-224 | ChiSq=642.22 df=40 pval=1.29e-109 | ChiSq=1049.062035 df=40 pval=6.39e-194 | ChiSq=170.87 df=40 pval= 4.16e-18 |
| Year Collected:Regions:Methamphetamine | ChiSq=150.68 df=40 pval= 9.59e-15 | ChiSq=118.35 df=40 pval= 1.12e-09 | ChiSq=143.58 df=40 pval= 1.36e-13 | ChiSq=61.54 df=40 pval=1.59e-02 | ChiSq=249.94 df=40 pval= 3.56e-32 | ChiSq=184.31 df=40 pval= 2.08e-20 | ChiSq=136.79 df=40 pval= 1.64e-12 | ChiSq=340.023547 df=40 pval= 3.24e-49 | ChiSq=112.36 df=40 pval= 8.54e-09 |

**Supplemental Digital Content 1. Co-Positivity Analysis – Analysis of Deviance Results for Nine Independent Logistic Regression Models**

*Notes:*

A logistic regression model for each of the nine independent drug or drug classes was performed containing collection year, US census division, sex, age, health care specialty, methamphetamine detection status (positive or negative) main effects and collection year by US census division by methamphetamine detection status interaction effects. The drug or drug class detection was modeled as the response variable. Type III Likelihood ratio tests are shown for main and interaction effects. Other opioids include codeine, hydrocodone, hydromorphone, morphine, oxycodone, and oxymorphone.