

Supplementary Table S4: Summary of the features selected for inclusion in the BRD2 model with associated chi square correlation coefficients.

Feature Importance	
Feature	Chi Square Correlation Coefficient
Lot Arrival Weight	5883.277922
Second Pull Event DOF	834.7695641
Drug Name	747.6033154
Second Pull Event Weight	727.9967012
Event Weight	714.3840295
Event DOF	688.6798818
Drug Class	674.6072373
ADG at Second Pull	313.7334169
ADG at Pull	289.1462645
Days Between Pulls	266.4971166
Second Pull Difference from Yard Pull Moving 28 Day Average	254.5541031
Second Pull Difference from Yard Pull Moving 21 Day Average	244.2552955
Second Pull Difference from Yard Pull Moving 14 Day Average	242.3834577
Second Pull Month	193.6363286
Difference from Yard Pull Moving 21 Day Average	184.2238347
Lot Head In	175.7987889
Pulls Today	171.891481
Pulls Last Week	166.7031833
Second Pull Yard Pull Moving 7 Day Average	163.2569589
Second Pull Difference from Yard Pull Moving 7 Day Average	162.219898
Difference from Yard Pull Moving 28 Day Average	160.2515969
Second Pull Yard Pull Moving 3 Day Average	158.4757184
Second Pull Yard Pulls Today	158.0993427
Second Pull Yard Pull Moving 5 Day Average	156.3171592

Second Pull Yard Pulls Last Week	152.0904538
Second Pull Yard Pull Moving 28 Day Average	151.8417672
Second Pull Yard Pull Moving 14 Day Average	148.9196045
Second Pull Yard Pull Moving 21 Day Average	145.2769934
Difference from Yard Pull Moving 14 Day Average	144.0239092
Death Count	143.0168193
Second Pull Pulls Today	142.6409059
Second Pull Difference from Yard Pull Moving 5 Day Average	139.6821739
Origin Longitude	134.7853158
Difference from Yard Pull Moving 7 Day Average	133.9455601
Pull Month	133.4447939
Yard Pulls Moving 21 Day Average	132.9032049
Second Pull Difference from Yard Pull Moving 3 Day Average	130.3977869
Yard Pulls Moving 14 Days Average	129.7740312
Yard Pulls Last Week	129.325457
Railer Count	127.9973476
Second Pull Railer Count	127.7113414
Second Pull Pulls Last Week	126.4887276
Sex	126.4271189
Arrival Month	125.7135927
Temp	125.4594175
Yard Pull Moving 28 Day Average	125.0878284
Lot Max Month	122.5586843
Yard Pulls Today	122.4779628
Yard Pulls Moving 3 Day Average	121.4890673
Yard Pulls Moving 7 Day Average	121.1558651