Fraud Detection Report

# Potential Fraud - Random Forest

## Top 10 Prescriber to Dispenser Locations

This table shows the top 10 Prescribe/Dispenser locations based on resiude.

fraud\_data\_table

| **PrescriberLocation** | **DispenserLocation** | **HB** | **DispenserLocationType** | **PrescriberLocationType** | **AvgResidual** | **MaxRatio** | **Count** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 55,357 | 7,142 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.95254755 | 2.1459694989 | 2 |
| 55,201 | 7,105 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.81080970 | 2.0761316872 | 1 |
| 55,291 | 7,161 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.80502136 | 1.9433174224 | 1 |
| 55,287 | 7,154 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.72574391 | 1.8774066798 | 1 |
| 84,805 | 84,805 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | 1.71447275 | 2.5303030303 | 1 |
| 84,129 | 84,129 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | 1.67250143 | 4.0869565217 | 1 |
| 55,220 | 7,160 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.35715955 | 1.5891238671 | 1 |
| 55,145 | 7,156 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.29952774 | 1.4528795812 | 1 |
| 85,117 | 4,798 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.27312572 | 1.3856209150 | 1 |
| 85,193 | 9,105 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.18496872 | 1.3971252567 | 1 |
| 55,925 | 7,174 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.17679846 | 1.2515348501 | 1 |
| 84,307 | 9,107 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.13858014 | 1.4108333333 | 2 |
| 55,569 | 7,151 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.12631134 | 1.2730894603 | 1 |
| 55,451 | 7,003 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.04715074 | 1.1109761037 | 1 |
| 84,191 | 4,787 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.04289446 | 1.2476138032 | 1 |
| 84,237 | 4,668 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 1.02961345 | 1.3224017362 | 2 |
| 84,256 | 4,668 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 0.82255117 | 1.0669612508 | 1 |
| 84,237 | 4,644 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 0.78722276 | 1.0966964070 | 2 |
| 84,415 | 4,731 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 0.78636941 | 0.8747180027 | 1 |
| 55,381 | 7,115 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 0.77203117 | 0.8204621766 | 1 |
| 55,911 | 7,136 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 0.74310668 | 0.8042105263 | 1 |
| 84,773 | 84,773 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | 0.73017678 | 2.5114309907 | 1 |
| 55,521 | 55,521 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | 0.72019990 | 1.2120253165 | 2 |
| 84,538 | 4,794 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 0.67233796 | 0.8419138220 | 1 |
| 84,063 | 84,063 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | 0.61683189 | 2.6148531952 | 1 |
| 85,141 | 4,766 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | 0.61624841 | 0.7230881131 | 1 |
| 55,395 | 55,395 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | 0.08778111 | 2.2455216017 | 3 |
| 55,080 | 55,080 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | 0.08337814 | 2.3242358079 | 3 |
| 84,275 | 84,275 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | 0.07646452 | 2.8064516129 | 2 |
| 55,446 | 55,446 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | 0.01065298 | 1.2752688172 | 2 |
| 84,810 | 84,810 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | -0.09111086 | 1.8434940855 | 2 |
| 55,253 | 55,253 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | -0.10207143 | 1.7297872340 | 3 |
| 55,342 | 55,342 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | -0.68906157 | 0.0116279070 | 1 |
| 55,249 | 7,178 | S08000022 | COMMUNITY PHARMACY | GP PRACTICE | -0.69741338 | 0.0024410090 | 1 |
| 84,191 | 84,191 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | -0.77945103 | 0.3682085169 | 1 |
| 55,747 | 55,747 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | -0.81868875 | 0.2740000000 | 2 |
| 85,009 | 85,009 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | -1.35174752 | 0.0581092801 | 1 |
| 84,364 | 84,364 | S08000022 | DISPENSING DOCTOR | GP PRACTICE | -1.40344942 | 0.0005837712 | 1 |

## Test Data Graph

This graph shows the output for the random forest model using NHS open data source Prescriber/Dispenser Dataset.

final\_graph

