# **Batch Code as an Indicator of Adverse Outcomes**

# **By Craig Paardekooper**

All the Pfizer batch codes were ordered alphabetically. For each Pfizer batch the number of adverse reports in VAERS was divided by the size of the batch shipped in doses, in order to get adverse reactions per dose shipped. This is not per dose used, but per dose shipped.

Here are the results

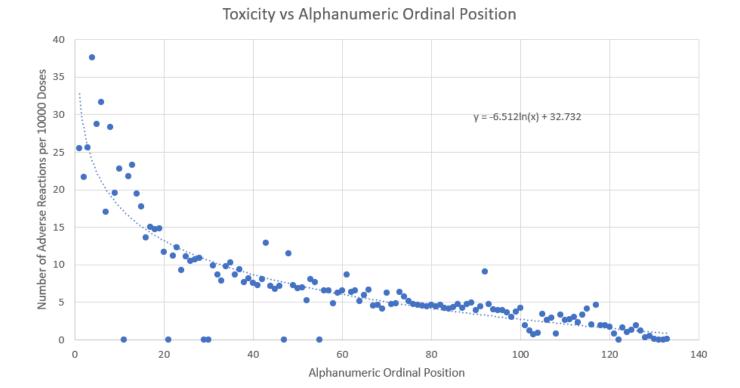
| code    | adr  | size    | tox      | ordinal |
|---------|------|---------|----------|---------|
| Eh9899  | 2069 | 810225  | 25.53612 | 1       |
| Ej1685  | 1679 | 773175  | 21.71565 | 2       |
| EJ1686  | 1587 | 620100  | 25.59265 | 3       |
| EK4176  | 1213 | 322725  | 37.58618 | 4       |
| Ek5730  | 2512 | 875550  | 28.69054 | 5       |
| EK9231  | 3443 | 1089075 | 31.61398 | 6       |
| EL0140  | 1235 | 726375  | 17.00224 | 7       |
| EL0142  | 1790 | 632775  | 28.2881  | 8       |
| EL1283  | 2262 | 1159275 | 19.5122  | 9       |
| EL1284  | 2300 | 1010295 | 22.76563 | 10      |
| El324?  | 1    | 1121250 | 0.008919 | 11      |
| EL3246  | 2164 | 995475  | 21.73837 | 12      |
| EL3247  | 2506 | 1077375 | 23.26024 | 13      |
| EL3248  | 1930 | 993525  | 19.42578 | 14      |
| EL3249  | 1987 | 1121250 | 17.72129 | 15      |
| EL3302  | 1475 | 1083225 | 13.61675 | 16      |
| EL8982  | 1917 | 1274325 | 15.04326 | 17      |
| EL9261  | 1782 | 1210950 | 14.71572 | 18      |
| EL9262  | 1929 | 1303575 | 14.79777 | 19      |
| EL9263  | 666  | 568425  | 11.71659 | 20      |
| EL9263* | 2    | 568425  | 0.035185 | 21      |
| EL9264  | 1423 | 1269450 | 11.20958 | 22      |
| EL9265  | 1186 | 961350  | 12.33682 | 23      |
| EL9266  | 1132 | 1219725 | 9.280781 | 24      |
| EL9267  | 1104 | 992550  | 11.12287 | 25      |
| EL9269  | 1438 | 1374750 | 10.46008 | 26      |
| EM9809  | 1173 | 1101750 | 10.6467  | 27      |
| EM9810  | 1110 | 1014975 | 10.93623 | 28      |
| EN????  | 1    | 544050  | 0.018381 | 29      |
| EN?208  | 1    | 3149640 | 0.003175 | 30      |
| EN5318  | 2619 | 2644200 | 9.904697 | 31      |
| EN6198  | 2253 | 2589210 | 8.701496 | 32      |
| EN6199  | 2129 | 2696850 | 7.894395 | 33      |
| EN6200  | 2337 | 2388555 | 9.784158 | 34      |
| EN6201  | 2686 | 2620800 | 10.24878 | 35      |
| EN6202  | 2279 | 2615145 | 8.714622 | 36      |
| EN6203  | 2069 | 2218125 | 9.327698 | 37      |
| EN6204  | 2057 | 2697240 | 7.626314 | 38      |
| EN6205  | 2626 | 3224130 | 8.144833 | 39      |
| EN6206  | 2224 | 2960100 | 7.51326  | 40      |

| EN6207   | 2436        | 3334500           | 7.305443          | 41 |
|----------|-------------|-------------------|-------------------|----|
| EN6208   | 2537        | 3149640           | 8.054889          | 42 |
| EN9581   | 702         | 544050            | 12.90323          | 43 |
| EP6955   | 2460        | 3443310           | 7.144288          | 44 |
| Ep7533   | 1996        | 2935530           | 6.799454          | 45 |
| ep7534   | 2106        | 2930850           | 7.185629          | 46 |
| ER????   | 1           | 2764710           | 0.003617          | 47 |
| ER2613   | 3177        | 2764710           | 11.49126          | 48 |
| ER8727   | 2153        | 2950740           | 7.296475          | 49 |
| ER8729   | 2213        | 3216330           | 6.880513          | 50 |
| ER8730   | 2023        | 2896920           | 6.983279          | 51 |
| ER8731   | 1653        | 3140280           | 5.263862          | 52 |
| er8732   | 2554        | 3180060           | 8.031295          | 53 |
| ER8733   | 2562        | 3335670           | 7.680616          | 54 |
| Er8733** | 1           | 3335670           | 0.002998          | 55 |
| ER8734   | 1964        | 3017430           | 6.50885           | 56 |
| ER8735   | 1876        | 2877030           | 6.520613          | 57 |
| ER8736   | 1519        | 3140280           | 4.837148          | 58 |
| ER8737   | 1941        | 3081780           | 6.298308          | 59 |
| EW0150   | 2322        | 3539250           | 6.560712          | 60 |
| EW0151   | 2248        | 2606760           | 8.623732          | 61 |
| ew0153   | 1783        | 2808000           | 6.349715          | 62 |
| Ew0158   | 1724        | 2645370           | 6.517047          | 63 |
| EW0161   | 1579        | 3100500           | 5.092727          | 64 |
| EW0162   | 1832        | 3060720           | 5.98552           | 65 |
| EW0164   | 1753        | 2638350           | 6.644304          | 66 |
| EW0165   | 277         | 611910            | 4.526809          | 67 |
| ew0167   | 1415        | 3079440           | 4.594991          | 68 |
| EW0168   | 1222        | 2946060           | 4.147913          | 69 |
| EW0169   | 1645        | 2652390           | 6.201954          | 70 |
| EW0170   | 1403        | 2953080           | 4.750972          | 71 |
| EW0171   | 1706        | 3545100           | 4.812276          | 72 |
| EW0172   | 2019        | 3182400           | 6.344268          | 73 |
| EW0173   | 1806        | 3140280           | 5.75108           | 74 |
| EW0175   | 1357        | 2638350           | 5.143366          | 75 |
| EW0176   | 1417        | 3022110           | 4.688777          | 76 |
| EW0177   | 1486        | 3189420           | 4.659154          | 77 |
| EW0178   | 1267        | 2822040           | 4.48966           | 78 |
| EW0179   | 1692        | 3837600           | 4.409006          | 79 |
| EW0180   | 1417        | 3078270           | 4.603235          | 80 |
| EW0181   | 1327        | 2984670           | 4.446053          | 81 |
| ew0182   | 1330        | 2885220           | 4.6097            | 82 |
| EW0182   | 1243        | 2965950           | 4.1909            | 83 |
| EW0185   | 1437        | 3492450           | 4.11459           | 84 |
| EW0186   | 1311        | 3033810           | 4.321299          | 85 |
| EW0187   | 1442        | 3065400           | 4.704117          | 86 |
| ew0191   | 1380        | 3281850           | 4.204945          | 87 |
| EW0191   | 1384        | 2922660           | 4.735412          | 88 |
| EW0198   | 1181        |                   | 4.733412          | 89 |
| ew0202   |             | 2373930<br>650520 | 3.950686          | 90 |
| EW0202   | 257<br>1271 | 2857140           | 4.448504          | 90 |
| LAAOZI/  | 12/1        | 203/140           | <del>+</del> 0304 | 31 |

| EY0584 | 374  | 413010   | 9.055471 | 92  |
|--------|------|----------|----------|-----|
| FA6780 | 1437 | 3032550  | 4.738586 | 93  |
| FA7484 | 883  | 2182500  | 4.045819 | 94  |
| FA7485 | 1187 | 2993850  | 3.964794 | 95  |
| FC3180 | 1195 | 3046950  | 3.921955 | 96  |
| FC3181 | 1125 | 3129750  | 3.594536 | 97  |
| FC3182 | 991  | 3254400  | 3.045108 | 98  |
| FC3183 | 1191 | 3179250  | 3.746167 | 99  |
| FC3184 | 1374 | 3209400  | 4.281174 | 100 |
| FD0809 | 639  | 3357750  | 1.90306  | 101 |
| FD0810 | 68   | 542400   | 1.253687 | 102 |
| FD7218 | 180  | 2720250  | 0.661704 | 103 |
| FD7220 | 1    | 10530    | 0.949668 | 104 |
| FD8448 | 955  | 2771550  | 3.445725 | 105 |
| FE3590 | 851  | 3309930  | 2.571051 | 106 |
| FE3592 | 897  | 3085290  | 2.907344 | 107 |
| FE3594 | 292  | 3548610  | 0.822857 | 108 |
| FF2587 | 954  | 2889900  | 3.301152 | 109 |
| FF2588 | 784  | 3015090  | 2.600254 | 110 |
| FF2589 | 829  | 3045510  | 2.72204  | 111 |
| ff2590 | 976  | 3213990  | 3.036724 | 112 |
| FF2593 | 764  | 3338010  | 2.288789 | 113 |
| FF8839 | 927  | 2783430  | 3.330423 | 114 |
| FF8841 | 1230 | 2961270  | 4.153623 | 115 |
| fg3527 | 654  | 3287700  | 1.989233 | 116 |
| FH8020 | 1325 | 2868840  | 4.618591 | 117 |
| FH8027 | 570  | 2992860  | 1.904533 | 118 |
| FH8028 | 560  | 2944890  | 1.901599 | 119 |
| fh8030 | 501  | 2996370  | 1.672023 | 120 |
| fj1611 | 216  | 2757690  | 0.783264 | 121 |
| FJ1614 | 1    | 2808000  | 0.003561 | 122 |
| FJ1620 | 514  | 3252600  | 1.580274 | 123 |
| FJ8757 | 342  | 3368430  | 1.01531  | 124 |
| FJ8762 | 402  | 2989350  | 1.344774 | 125 |
| FK5127 | 2006 | 10556600 | 1.900233 | 126 |
| FK5618 | 1095 | 8891300  | 1.231541 | 127 |
| FL0007 | 331  | 11777900 | 0.281035 | 128 |
| fl3197 | 134  | 2928510  | 0.457571 | 129 |
| fl3198 | 40   | 3086460  | 0.129598 | 130 |
| fl3209 | 2    | 2812680  | 0.007111 | 131 |
| FL8094 | 5    | 5447200  | 0.009179 | 132 |
| FL8095 | 30   | 5468800  | 0.054857 | 133 |
| -      |      | -        | -        |     |

This dataset was reduced to 127 records after removing records with batch codes containing  $\ast$  or ?

This is simply from an ordering of batch codes by alphabet from A to Z. Here is how the adverse reactions per dose varied.



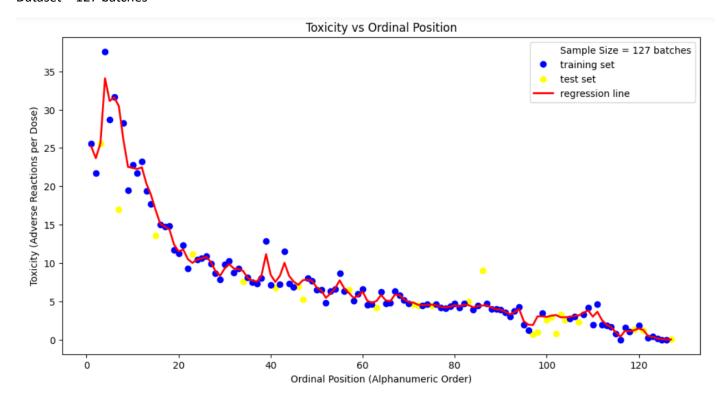
The chart shows a very clear pattern where number of reports of adverse events per doses shipped decreases steadily over the whole of 2021

# Using Machine Learning to Get a Read-out on Toxicity

# **Random Forest Regression**

Accuracy = 86.46% (tested against 127 random samples)

Dataset = 127 batches



#### Predicted Adverse Events per 10,000 Doses

```
Ordinal Position = 0
                                        Toxicity = 25.2 Adverse reactions per 10,000 Doses
                                        Toxicity = 25.2 Adverse reactions per 10,000 Doses
Ordinal Position = 1
                                    Toxicity = 23.67 Adverse reactions per 10,000 Doses
Ordinal Position = 2
Ordinal Position = 3 Toxicity = 25.6 Adverse reactions per 10,000 Doses
Ordinal Position = 4 Toxicity = 34.09 Adverse reactions per 10,000 Doses
Ordinal Position = 4
Ordinal Position = 4
Ordinal Position = 5
Ordinal Position = 5
Ordinal Position = 5
Ordinal Position = 6
Ordinal Position = 6
Ordinal Position = 7
Ordinal Position = 7
Ordinal Position = 8
Ordinal Position = 8
Ordinal Position = 9
Ordinal Position = 9
Ordinal Position = 10
Ordinal Position = 10
Ordinal Position = 11
Ordicity = 22.53
Ordinal Position = 11
Ordicity = 22.53
Ordinal Position = 11
Ordicity = 22.53
Ordinal Position = 11
Ordicity = 22.39
Ordinal Position = 12
Ordinal Position = 12
Ordinal Position = 13
Ordinal Position = 13
Ordinal Position = 14
Ordinal Position = 15
Ordinal Position = 16
Ordinal Position = 16
Ordinal Position = 17
Ordicity = 18.87
Ordinal Position = 16
Ordinal Position = 17
Ordicity = 14.76
Ordinal Position = 18
Ordinal Position = 19
Ordinal Position = 20
Ordinal Position = 20
Ordinal Position = 21
Ordinal Position = 21
Ordicity = 11.52
Ordinal Position = 21
Ordicity = 10.000
Ordinal Position = 22
Ordinal Position = 23
Ordinal Position = 24
Ordinal Position = 25
Ordinal Position = 27
Ordinal Position = 27
Ordinal Position = 28
Ordinal Position = 29
Ordinal Position = 20
Ordinal Position = 20
Ordinal Position = 21
Ordicity = 10.00
Ordinal Position = 21
Ordicity = 10.00
Ordinal Position = 21
Ordicity = 10.00
Ordicity = 10.000
Ordicity = 10.0
Ordinal Position = 23 Toxicity = 10.02 Adverse reactions per 10,000 Doses
Ordinal Position = 24 Toxicity = 10.46 Adverse reactions per 10,000 Doses
Ordinal Position = 25 Toxicity = 10.61 Adverse reactions per 10,000 Doses
Ordinal Position = 26 Toxicity = 10.79 Adverse reactions per 10,000 Doses
Ordinal Position = 27 Toxicity = 10.14 Adverse reactions per 10,000 Doses
Ordinal Position = 28 Toxicity = 8.94 Adverse reactions per 10,000 Doses
Ordinal Position = 29 Toxicity = 8.33 Adverse reactions per 10,000 Doses
Ordinal Position = 30 Toxicity = 9.29 Adverse reactions per 10,000 Doses
Ordinal Position = 31 Toxicity = 9.85 Adverse reactions per 10,000 Doses
Ordinal Position = 32 Toxicity = 9.29 Adverse reactions per 10,000 Doses
Ordinal Position = 33 Toxicity = 9.21 Adverse reactions per 10,000 Doses
Ordinal Position = 34 Toxicity = 8.97 Adverse reactions per 10,000 Doses
Ordinal Position = 35 Toxicity = 8.06 Adverse reactions per 10,000 Doses
Ordinal Position = 36 Toxicity = 7.71 Adverse reactions per 10,000 Doses
Ordinal Position = 37 Toxicity = 7.59 Adverse reactions per 10,000 Doses
Ordinal Position = 38 Toxicity = 8.37 Adverse reactions per 10,000 Doses
Ordinal Position = 39 Toxicity = 11.16 Adverse reactions per 10,000 Doses
Ordinal Position = 40 Toxicity = 8.47 Adverse reactions per 10,000 Doses
Ordinal Position = 41 Toxicity = 7.53 Adverse reactions per 10,000 Doses
Ordinal Position = 42 Toxicity = 8.33 Adverse reactions per 10,000 Doses
Ordinal Position = 43 Toxicity = 10.02 Adverse reactions per 10,000 Doses
Ordinal Position = 44 Toxicity = 8.32 Adverse reactions per 10,000 Doses
Ordinal Position = 45 Toxicity = 7.57 Adverse reactions per 10,000 Doses
Ordinal Position = 46 Toxicity = 7.16 Adverse reactions per 10,000 Doses
Ordinal Position = 47 Toxicity = 7.75 Adverse reactions per 10,000 Doses
Ordinal Position = 48 Toxicity = 7.84 Adverse reactions per 10,000 Doses
Ordinal Position = 49 Toxicity = 7.67 Adverse reactions per 10,000 Doses
Ordinal Position = 50 Toxicity = 6.82 Adverse reactions per 10,000 Doses
Ordinal Position = 51 Toxicity = 6.4 Adverse reactions per 10,000 Doses
Ordinal Position = 52 Toxicity = 5.47 Adverse reactions per 10,000 Doses
Ordinal Position = 53 Toxicity = 6.03 Adverse reactions per 10,000 Doses
Ordinal Position = 54 Toxicity = 6.71 Adverse reactions per 10,000 Doses
Ordinal Position = 55 Toxicity = 7.73 Adverse reactions per 10,000 Doses
Ordinal Position = 56 Toxicity = 6.68 Adverse reactions per 10,000 Doses
Ordinal Position = 57 Toxicity = 6.1 Adverse reactions per 10,000 Doses
Ordinal Position = 58 Toxicity = 5.46 Adverse reactions per 10,000 Doses
Ordinal Position = 59 Toxicity = 5.71 Adverse reactions per 10,000 Doses
Ordinal Position = 60 Toxicity = 6.26 Adverse reactions per 10,000 Doses
Ordinal Position = 61 Toxicity = 5.07 Adverse reactions per 10,000 Doses
Ordinal Position = 62 Toxicity = 4.83 Adverse reactions per 10,000 Doses Ordinal Position = 63 Toxicity = 5.04 Adverse reactions per 10,000 Doses Ordinal Position = 64 Toxicity = 5.83 Adverse reactions per 10,000 Doses
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Ordinal Position = 65 Toxicity = 5.14 Adverse reactions per 10,000 Doses
 Ordinal Position = 66 Toxicity = 5.02 Adverse reactions per 10,000 Doses
 Ordinal Position = 67 Toxicity = 5.88 Adverse reactions per 10,000 Doses
 Ordinal Position = 68 Toxicity = 5.82 Adverse reactions per 10,000 Doses
 Ordinal Position = 69 Toxicity = 5.25 Adverse reactions per 10,000 Doses
 Ordinal Position = 70 Toxicity = 4.91 Adverse reactions per 10,000 Doses
 Ordinal Position = 71 Toxicity = 4.84 Adverse reactions per 10,000 Doses
 Ordinal Position = 72 Toxicity = 4.56 Adverse reactions per 10,000 Doses
 Ordinal Position = 73 Toxicity = 4.52 Adverse reactions per 10,000 Doses
 Ordinal Position = 74 Toxicity = 4.54 Adverse reactions per 10,000 Doses
 Ordinal Position = 75 Toxicity = 4.56 Adverse reactions per 10,000 Doses
Ordinal Position = 76 Toxicity = 4.49 Adverse reactions per 10,000 Doses
Ordinal Position = 77 Toxicity = 4.28 Adverse reactions per 10,000 Doses
Ordinal Position = 78 Toxicity = 4.19 Adverse reactions per 10,000 Doses
Ordinal Position = 79 Toxicity = 4.31 Adverse reactions per 10,000 Doses
Ordinal Position = 80 Toxicity = 4.51 Adverse reactions per 10,000 Doses
Ordinal Position = 81 Toxicity = 4.34 Adverse reactions per 10,000 Doses
Ordinal Position = 82 Toxicity = 4.57 Adverse reactions per 10,000 Doses
Ordinal Position = 83 Toxicity = 4.51 Adverse reactions per 10,000 Doses
Ordinal Position = 84 Toxicity = 4.23 Adverse reactions per 10,000 Doses
 Ordinal Position = 85 Toxicity = 4.39 Adverse reactions per 10,000 Doses
 Ordinal Position = 86 Toxicity = 4.46 Adverse reactions per 10,000 Doses
 Ordinal Position = 87 Toxicity = 4.48 Adverse reactions per 10,000 Doses
 Ordinal Position = 88 Toxicity = 4.18 Adverse reactions per 10,000 Doses
 Ordinal Position = 89 Toxicity = 3.98 Adverse reactions per 10,000 Doses
 Ordinal Position = 90 Toxicity = 3.91 Adverse reactions per 10,000 Doses
 Ordinal Position = 91 Toxicity = 3.63 Adverse reactions per 10,000 Doses
 Ordinal Position = 92 Toxicity = 3.3 Adverse reactions per 10,000 Doses
Ordinal Position = 93 Toxicity = 3.61 Adverse reactions per 10,000 Doses Ordinal Position = 94 Toxicity = 3.99 Adverse reactions per 10,000 Doses Ordinal Position = 95 Toxicity = 2.42 Adverse reactions per 10,000 Doses Ordinal Position = 96 Toxicity = 1.96 Adverse reactions per 10,000 Doses Ordinal Position = 97 Toxicity = 1.92 Adverse reactions per 10,000 Doses Ordinal Position = 98 Toxicity = 3.05 Adverse reactions per 10,000 Doses Ordinal Position = 99 Toxicity = 3.05 Adverse reactions per 10,000 Doses Ordinal Position = 100 Toxicity = 2.98 Adverse reactions per 10,000 Doses Ordinal Position = 101 Toxicity = 3.14 Adverse reactions per 10,000 Doses Ordinal Position = 102 Toxicity = 3.21 Adverse reactions per 10,000 Doses Ordinal Position = 103 Toxicity = 2.93 Adverse reactions per 10,000 Doses Ordinal Position = 104 Toxicity = 2.93 Adverse reactions per 10,000 Doses Ordinal Position = 105 Toxicity = 2.98 Adverse reactions per 10,000 Doses Ordinal Position = 105 Toxicity = 2.93 Adverse reactions per 10,000 Doses Ordinal Position = 105 Toxicity = 2.98 Adverse reactions per 10,000 Doses Ordinal Position = 105 Toxicity = 3.09 Adverse reactions per 10,000 Doses Ordinal Position = 107 Toxicity = 3.19 Adverse reactions per 10,000 Doses Ordinal Position = 108 Toxicity = 3.52 Adverse reactions per 10,000 Doses Ordinal Position = 109 Toxicity = 3.82 Adverse reactions per 10,000 Doses Ordinal Position = 110 Toxicity = 3.64 Adverse reactions per 10,000 Doses Ordinal Position = 111 Toxicity = 3.64 Adverse reactions per 10,000 Doses Ordinal Position = 111 Toxicity = 2.56 Adverse reactions per 10,000 Doses Ordinal Position = 112 Toxicity = 2.56 Adverse reactions per 10,000 Doses Ordinal Position = 111 Toxicity = 2.56 Adverse reactions per 10,000 Doses Ordinal Position = 112 Toxicity = 2.56 Adverse reactions per 10,000 Doses Ordinal Position = 112 Toxicity = 2.56 Adverse reactions per 10,000 Doses Ordinal Position = 112 Toxicity = 2.56 Adverse reactions per 10,000 Doses Ordinal Position = 110 Toxicity = 3.64 Adverse reaction
Ordinal Position = 93 Toxicity = 3.61 Adverse reactions per 10,000 Doses
Ordinal Position = 112 Toxicity = 2.56 Adverse reactions per 10,000 Doses
Ordinal Position = 113 Toxicity = 1.95 Adverse reactions per 10,000 Doses
Ordinal Position = 114 Toxicity = 1.64 Adverse reactions per 10,000 Doses
Ordinal Position = 115 Toxicity = 0.96 Adverse reactions per 10,000 Doses
 Ordinal Position = 116 Toxicity = 0.39 Adverse reactions per 10,000 Doses
 Ordinal Position = 117 Toxicity = 1.16 Adverse reactions per 10,000 Doses
 Ordinal Position = 118 Toxicity = 1.12 Adverse reactions per 10,000 Doses
 Ordinal Position = 119 Toxicity = 1.24 Adverse reactions per 10,000 Doses
 Ordinal Position = 120 Toxicity = 1.47 Adverse reactions per 10,000 Doses
 Ordinal Position = 121 Toxicity = 1.26 Adverse reactions per 10,000 Doses
 Ordinal Position = 122 Toxicity = 0.49 Adverse reactions per 10,000 Doses
 Ordinal Position = 123 Toxicity = 0.36 Adverse reactions per 10,000 Doses
 Ordinal Position = 124 Toxicity = 0.19 Adverse reactions per 10,000 Doses
 Ordinal Position = 125 Toxicity = 0.06 Adverse reactions per 10,000 Doses
 Ordinal Position = 126 Toxicity = 0.03 Adverse reactions per 10,000
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#### A Change in Uptake

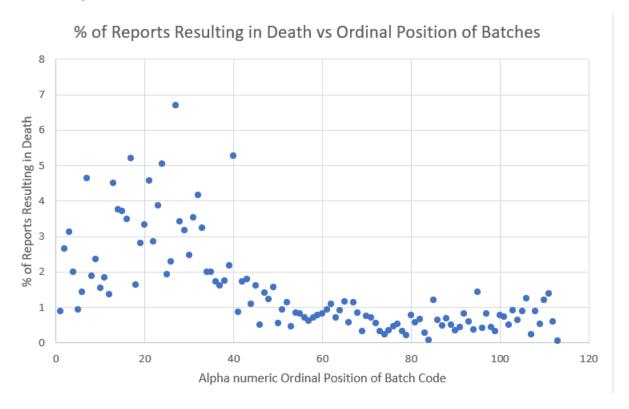
1. Fewer people were taking the vaccines as time passed, so a larger % of batches would remained unused, and consequently batches of equal size would register fewer adverse reports.

#### A Change in Recipient Demographic

- 1. The initial recipients were the aged, who would be more vulnerable to any physical stress or harm caused by the iabs.
- 2. The initial recipients had more comorbidities, and/or were in care. So their physiology was already compromised.

#### A Test to Determine if Change in Uptake is the Reason

To assess whether the trend is due to change in toxicity rather than change in uptake, the % of reports indicating a serious outcome can be used. If this still falls over time, then that would indicate that a higher % of the early batches were causing severe outcomes.

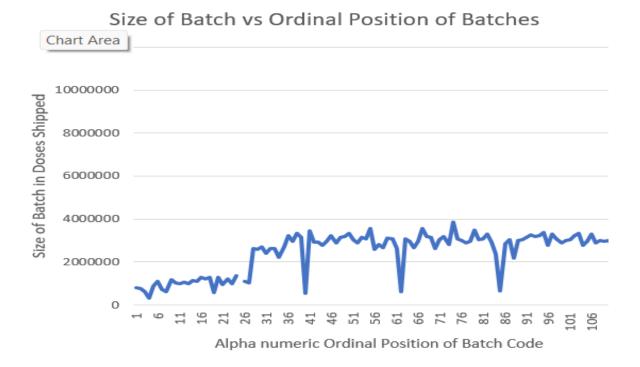


Here it can be seen that for the first 35 Pfizer batch codes in alpha numeric sequence, many of these batches have a high % of reports of death, compared to subsequent Pfizer batches. The % of reports resulting in an outcome of death is elevated in these early batches. All of them were above 1 % – most between 2% and 5%. When we look at the subsequent batches between ordinal positions 35 and 52, we see that the % of reports resulting in death is focused between 1% and 2 %. After batch 52, nearly all subsequent batches are focused in the 0 to 1 % range.

So there appears to be a significant decline in % of reports with an outcome of death between the batches from 0 to 80 in ordinal position.

#### Size of Batch and Toxicity

Here is a chart of the size of the batches vs their ordinal position in the alpha numeric batch code sequence –



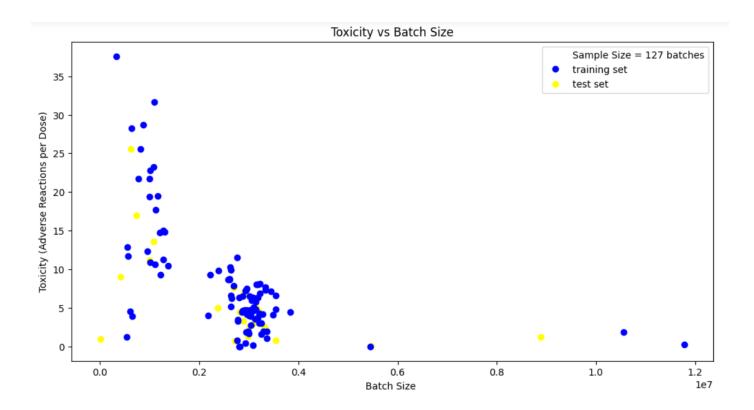
As you can see, the early batches (batches 0 to 36), were smaller than subsequent batches. So as a general rule, we can say that the smaller batches were more toxic because a higher % of reports for these batches eventuated in death. Now here is a curious thing. In the subsequent batches you can see that most of the sizes are in the range of about 3 million doses, but there are three batches that have a small size in the range of 60,000 each – these are batch 40, batch 62 and batch 85.

Batch 40 also happens to have a high % (5 %) of reports resulting in death! And both Batch 62, and batch 85 are associated with peaks of death.

The other odd thing about these 3 small batches is that they were introduced periodically – every 22 or 23 batches.

Its possible that highly toxic batches were small, so that they could target small populations, whilst larger batches were low toxicity, so that they would garner the support of the majority!

In the next chart you can see Toxicity plotted against batch size. Notice that the smaller batches form a distinct cluster separated from the larger batches. Also notice that they have an elevated toxicity compared to the larger batches. This toxicity also forms a distinct cluster – because it begins where the lower toxicity range of the larger batches ends.



# A Test to Determine if Change in Age of Recipients is the Reason

If the results are filtered for people of specific ages, and it is found that people of any chosen age still demonstrate a higher % of serious outcomes for early batches, then this would show that the effect was independent of age of recipients.

# A Change in Toxicity

The vaccines became less toxic over time – due to

- 1. Improved formulation
- 2. Reduced dosages
- 3. Decay of harmful ingredients

#### Conclusion

As you can see from the results above, there is a steady and constant decline in reports of adverse reactions per doses shipped for each batch when ordered alpha numerically.

Further research is needed to determine the cause/s.

### So much is Unknown

It should always be remembered that you have a fundamental legal right to refuse ANY medical intervention. This is a legal and constitutional right, and cannot be superseded by ANY health regulation, pandemic treaty or any new laws passed by government.

In a situation like this, were a new experimental gene therapy is being rolled out, with a mechanism that is known to be harmful, then you have a right to say no. When so little is known it is not even possible to exercise informed consent.