## Supplementary Materials For

## Laderoute MP. Trained immunity of M1-like foamy macrophages: A key role of human endogenous retrovirus K102 particles

**Table S1.**

These ONS data were used to support Table 1 and Figure 5. ONS Age-Standardized Monthly Mortality Rates Per 100,000 Person-Years for the Vaccinated (Vaxed) and Non-vaccinated (Unvaxed) January 1, 202,1 to May 31, 2023. Note for the vaxed the totals reported by the ONS were corrected based on the addition of the individual monthly mortality rate subcategories of doses as explained elsewhere. [98] CC-by 4.0.

| ENGLAND ONS Data | | Monthly Mortality Rates per 100,000 person-years | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | UNVAXED | | | VAXED | | |
| | | | non C19 | C19 | Non-C19/C19 ratio | non C19 | C19 | Non-C19/C19 ratio |
| | 2021 | Jan | 1320 | 1187 | 1.11 | 1958 | 1526 | 1.28 |
| | | Feb | 3087 | 2174 | 1.42 | 2689 | 457 | 5.89 |
| | | Mar | 2716 | 592 | 4.59 | 3909 | 284 | 13.77 |
| | | Apr | 2153 | 146 | 14.77 | 4855 | 184 | 26.39 |
| | | May | 1673 | 46 | 36.77 | 8426 | 85 | 99.72 |
| | | Jun | 1534 | 56 | 27.59 | 9916 | 88 | 113.07 |
| | | Jul | 1392 | 218 | 6.38 | 9960 | 225 | 44.29 |
| | | Aug | 1307 | 404 | 3.23 | 9266 | 403 | 23.00 |
| | | Sep | 1297 | 368 | 3.53 | 7884 | 520 | 15.16 |
| | | Oct | 1302 | 322 | 4.04 | 11845 | 569 | 20.83 |
| | | Nov | 1287 | 421 | 3.05 | 14155 | 721 | 19.63 |
| | | Dec | 1358 | 521 | 2.61 | 15501 | 1121.9 | 13.82 |
| | av 2021 | | 1702 | 538 | 3.16 | 8364 | 515 | 16.23 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2022 | Jan | 1227 | 585 | 2.10 | 16417 | 2311 | 7.10 |
| | Feb | 1126 | 259 | 4.35 | 11346 | 1128 | 10.05 |
| | Mar | 1048 | 184 | 5.71 | 9445 | 764 | 12.37 |
| | Apr | 1000 | 205 | 4.89 | 11622 | 801 | 14.51 |
| | May | 795 | 78 | 10.24 | 7914 | 262 | 30.23 |
| | Jun | 1063 | 63 | 16.87 | 12789 | 294 | 43.50 |
| | Jul | 1175 | 168 | 6.99 | 12660 | 787 | 16.09 |
| | Aug | 1050 | 97 | 10.82 | 9598 | 276 | 34.78 |
| | Sep | 1033 | 46 | 22.46 | 9227 | 237 | 38.93 |
| | Oct | 1097 | 124 | 8.85 | 9783 | 515 | 19.00 |
| | Nov | 1129 | 65 | 17.37 | 9576 | 323 | 29.65 |
| | Dec | 1538 | 114 | 13.49 | 12489 | 388 | 32.19 |
| Av 2022 | | 1107 | 166 | 6.69 | 11072 | 674 | 16.43 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2023 | Jan | 1315 | 122 | 10.79 | 10216 | 388 | 26.32 |
| | Feb | 1177 | 83 | 14.20 | 7601 | 267 | 28.50 |
| | Mar | 1073 | 96 | 11.15 | 5659 | 329 | 17.21 |
| | Apr | 1024 | 83 | 12.36 | 5264 | 223 | 23.66 |
| | May | 902 | 46 | 19.56 | 4696 | 82 | 57.20 |
| Av 2023 | | 1098 | 86 | 12.77 | 6687 | 258 | 25.96 |

ONS England Datasets Released 25 August 2023 and 6 July 2022.
**https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/deathsbyvaccinationstatusengland**

NB: Data used for **Figure 5** and **Table 1**.

**Table S2. VAERS Mortality DATA used for plotting Figure 6.** [99] (From https://wonder.cdc.gov/vaers.html ) CC-by 4.0.

**Monovalent mRNA** — Reported Deaths to VAERS

2025 10 16 — CDC VAERS — Data to 2025 08 30

**Moderna**

| Year | Month | Total | unknown onset | known onset | A: 60-120 | B: 120 + | A + B | % 60+ (A + B)/D x 100 |
|---|---|---|---|---|---|---|---|---|
| | | | | D=denominator | | | | |
| 2020 | December | 16 | 2 | 14 | 0 | 0 | 0 | 0 |
| **2021** | **Jan** | 426 | 17 | **409** | 1 | **3** | **4** | **0.98%** |
| | **Feb** | 743 | 22 | **721** | 0 | 2 | 2 | 0.28% |
| | **Mar** | 937 | 31 | **906** | 12 | 2 | 14 | 1.55% |
| | **April** | 844 | 35 | **809** | 73 | 0 | 73 | 9.02% |
| | **May** | 619 | 28 | **591** | 115 | 8 | 123 | 20.81% |
| | **June** | 353 | 18 | **335** | 87 | 28 | 115 | 34.33% |
| | **July** | 375 | 14 | **361** | 50 | 82 | 132 | 36.57% |
| | **Aug** | 603 | 29 | **574** | 71 | 311 | 382 | 66.55% |
| | **Sept** | 716 | 27 | **689** | 43 | 460 | 503 | **73.00%** |
| | **Oct** | 547 | 24 | **523** | 31 | 354 | 385 | **73.61%** |
| | **Nov** | 539 | 21 | **518** | 13 | 290 | 303 | 58.49% |
| | **Dec** | 619 | 28 | **591** | 25 | 262 | 287 | 48.56% |
| **2021** | **Totals** | 7321 | 294 | 7027 | 521 | 1802 | 2323 | **33.06%** |
| **2022** | **Jan** | 795 | 36 | **759** | 59 | 466 | 525 | 69.17% |
| | **Feb** | 582 | 18 | **564** | 90 | 331 | 421 | **74.65%** |
| | **Mar** | 281 | 10 | **271** | 57 | 137 | 194 | 71.59% |
| | **April** | 164 | 11 | **153** | 18 | 83 | 101 | 66.01% |
| | **May** | 146 | 7 | **139** | 8 | 73 | 81 | 58.27% |
| | **June** | 173 | 9 | **164** | 9 | 106 | 115 | 70.12% |
| | **July** | 190 | 11 | **179** | 15 | 126 | 141 | 78.77% |
| | **Aug** | 219 | 7 | **212** | 16 | 167 | 183 | **86.32%** |
| | **Sept** | 167 | 5 | **162** | 3 | 129 | 132 | 81.48% |
| | **Oct** | 134 | 2 | **132** | 6 | 111 | 117 | 88.64% |
| | **Nov** | 115 | 1 | **114** | 6 | 98 | 104 | **91.23%** |
| | **Dec** | 92 | 4 | **88** | 6 | 68 | 74 | 84.09% |
| **2022** | **Totals** | 3058 | 121 | 2937 | 293 | 1895 | 2188 | **74.50%** |

**Monovalent mRNA** — Reported Deaths to VAERS

2025 10 16 — CDC VAERS — Data to 2025 08 30

**Pfizer-BioNTech**

| Year | Month | Total | unknown onset | known onset | A: 60-120 | B: 120 + | A + B | % 60+ (A + B)/D x 100 |
|---|---|---|---|---|---|---|---|---|
| | | | | D=denominator | | | | |
| 2020 | December | 91 | 17 | **74** | 0 | 0 | 0 | 0 |
| **2021** | **Jan** | 1314 | 128 | **1186** | 0 | 1 | 1 | 0.08% |
| | **Feb** | 1378 | 100 | **1278** | 2 | 2 | 4 | 0.31% |
| | **Mar** | 1426 | 117 | **1309** | 25 | 4 | 29 | 2.22% |
| | **April** | 1644 | 134 | **1510** | 111 | 11 | 122 | 8.08% |
| | **May** | 1476 | 112 | **1364** | 207 | 37 | 244 | **17.89%** |
| | **June** | 1267 | 91 | **1176** | 89 | 55 | 144 | 12.24% |
| | **July** | 1087 | 100 | **987** | 95 | 159 | 254 | 25.73% |
| | **Aug** | 1234 | 100 | **1134** | 129 | 536 | 665 | 58.64% |
| | **Sept** | 1189 | 83 | **1106** | 72 | 644 | 716 | **64.74%** |
| | **Oct** | 1051 | 85 | **966** | 47 | 427 | 474 | 49.07% |
| | **Nov** | 915 | 67 | **848** | 42 | 293 | 335 | 39.50% |
| | **Dec** | 984 | 90 | **894** | 65 | 303 | 368 | 41.16% |
| **2021** | **Totals** | 14965 | 1207 | 13758 | 884 | 2472 | 3356 | 24.39% |
| **2022** | **Jan** | 1127 | 57 | **1070** | 155 | 540 | 695 | 64.95% |
| | **Feb** | 820 | 37 | **783** | 101 | 409 | 510 | **65.13%** |
| | **Mar** | 410 | 27 | **383** | 29 | 214 | 243 | 63.45% |
| | **April** | 234 | 31 | **203** | 30 | 58 | 88 | 43.35% |
| | **May** | 198 | 16 | **182** | 12 | 81 | 93 | 51.10% |
| | **June** | 211 | 19 | **192** | 13 | 92 | 105 | 54.69% |
| | **July** | 229 | 15 | **214** | 22 | 115 | 137 | 64.02% |
| | **Aug** | 258 | 13 | **245** | 21 | 175 | 196 | **80.00%** |
| | **Sept** | 207 | 18 | **189** | 12 | 129 | 141 | 74.60% |
| | **Oct** | 217 | 22 | **195** | 3 | 112 | 115 | 58.97% |
| | **Nov** | 194 | 18 | **176** | 5 | 87 | 92 | 52.27% |
| | **Dec** | 196 | 15 | **181** | 6 | 90 | 96 | 53.04% |
| **2022** | **Totals** | 4301 | 288 | 4013 | 409 | 2102 | 2511 | 62.57% |

**Table S3. VAERS Mortality Data by COVID-19 (Bioweaponized SARS-CoV-2) and Non-COVID-19 Deaths (associated with Shedding) for interpretation of Figure 6 According to Months Viewed.**

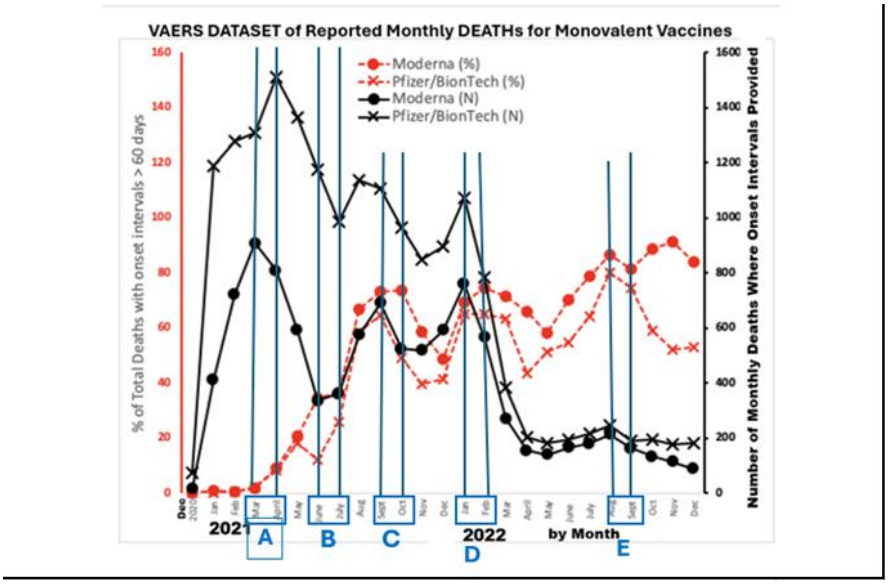
Image for Supplemental Table 3 to Support Interpretation of Figure 6 (VAERS data).

**For Raw data pulled on January 20, 2026 from the National Vaccine Information Center portal (data cutoff on June 2, 2026) to support interpretation of Figure 6, please see:**

https://hervk102.substack.com/p/nvic-raw-data-on-deaths-following.



**These supplemental Tables were used to assist in the interpretation of Figure 6.**




**VAERS Reported Deaths for mRNA Vaccines Involving COVID-19 or SARS-CoV-2 Test Positive (2020 to 2025)**

Cutoff date Jan 2, 2026 NVIC portal ; mono and bivalent Vaccines

| Selected Months | Particulars About the Period Studied | Total Deaths | Portion of ALL Deaths (2020 to 2025) Reported During the Period | Pfizer-BioNTech Reported Total Deaths | Pfizer COVID-19 Deaths | Moderna Total Deaths | Moderna C19 deaths | % Total Deaths Involving C19 (I) | % of Total Deaths with Onset Intervals > 60 Days | % of Total Deaths with Onset Intervals 0-2 days J | % of Total Deaths with Onset Intervals 0-60 days K | NON-C19 Deaths i.e., ALL Shedding Deaths 100% - I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VAERS Section 2 Coding | | | | | 10084268 | | 10084268 | | | Putative Vaccinator Shedding | | |
| 2020 to 2025 | Average | 28,728 | 100.00% | 18819 | 4082 | 9909 | 2725 | 36.17% | 34.51% | 29.88% | 65.49% | 63.83% |
| Age of Deceased | | | | | | | | | | | | |
| % of total 65+ | | 77.75% | | 78.17% | 84.00% | 77.25% | 84.86% | | | | | |
| <50 | | 7.58% | | 7.92% | 3.05% | 7.16% | 2.65% | | | | | |
| <18 | | 0.56% | | 0.93% | 0.43% | 0.12% | 0.00% | | | | | |

**VAERS Reported Deaths for mRNA Vaccines Involving COVID-19 or SARS-CoV-2 Test Positive (2020 to 2025)**

Cutoff date Jan 2, 2026 NVIC portal ; mono and bivalent Vaccines

| Selected Months | Particulars About the Period Studied | Total Deaths | Portion of ALL Deaths (2020 to 2025) Reported During the Period | Pfizer-BioNTech Reported Total Deaths | Pfizer COVID-19 Deaths | Moderna Total Deaths | Moderna C19 deaths | % Total Deaths Involving C19 (I) | % of Total Deaths with Onset Intervals > 60 Days | % of Total Deaths with Onset Intervals 0-2 days J | % of Total Deaths with Onset Intervals 0-60 days K | NON-C19 Deaths i.e., ALL Shedding Deaths 100% - I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VAERS Section 2 Coding | | | | | 10084268 | | 10084268 | | | Putative Vaccinator Shedding | | |
| B June/July 2021 | Putative Shedding Peak | 2,835 | 9.87% | 2188 | 188 | 647 | 197 | 7.97% | 23.09% | 38.38% | 76.91% | 92.03% |
| Age of Deceased | | | | | | | | | | | | |
| % of total 65+ | | 75.13% | | 78.36% | 84.87% | 68.20% | 82.14% | | | | | |
| <50 | | 9.77% | | 7.90% | 3.36% | 13.77% | 1.79% | | | | | |
| <18 | | 0.55% | | 0.81% | 0.84% | 0.00% | 0.00% | | | | | |
| E Aug/Sept 2022 | High Peak for Deaths with Onset Intervals >60 Days | 685 | 2.38% | 381 | 188 | 304 | 197 | 56.20% | 73.25% | 16.02% | 26.75% | 43.80% |
| Age of Deceased | | | | | | | | | | | | |
| % of total 65+ | | 78.31% | | 77.13% | 80.66% | 79.46% | 84.18% | | | | | |
| <50 | | 6.61% a | | 9.21% | 4.96% | 4.04% | 1.02% | | | | | |
| <18 | | 1.53% a | | 2.73% | 1.65% | 0.34% | 0.00% | | | | | |

RAW data available at https://hervk102.substack.com/p/nvic-raw-data-on-deaths-following

The VAERS reported total and COVID-19 associated deaths (% of total over 2020 to 2025) following spike mRNA vaccination are also provided to help interpret Figure 6.

**Table S4.**

| Supplemental Table 4. | | | | | | |
|---|---|---|---|---|---|---|
| **Myocarditis and/or Pericarditis CASES VAERS (via NVIC Portal)** | | | | | | |
| No restrictions on time period scanned. | Cutoff at January 2, 2026 | | | | | |
| **Parameter** | | | | | | |
| | Pfizer-BioNTech | | | Moderna | | |
| | Total | Male % | Female % | Total | Male % | Female % |
| **Cases** | 20,666 | 59% | 41% | 5,912 | 67% | 33% |
| | | | | | | |
| **AGE Affected (years of age)** | 6+ | | | 6+ | | |
| **Majority Age** | 18-29 | | | 18-49 | | |
| **Majority Onset Interval** | 0 days | | | 1 day | | |
| | | | | | | |
| **Cases with Onset Interval of 0 to 2 days** | 7238 | | | 1721 | | |
| **% Onset Period of 0-2 days** | 35% | 58% | 42% | 29% | 64% | 36% |
| | | | | | | |
| **Onset Intervals >60 days** | 1156 | 56% | 44% | 450 | 59% | 41% |
| **% Onset Intervals >60 days** | 5.60% | | | 7.61% | | |
| | | | | | | |
| **Cases with concurrent COVID-19** | 17 | 65% | 35% | 13 | 62% | 38% |
| **% Concurrent COVID-19** | 0.01% | | | 0.20% | | |
| **% without COVID-19** | 99.99% | | | 99.80% | | |
| | | | | | | |
| **DEATHS** | 380 | 66% | 34% | 116 | 66% | 34% |
| **% of CASES with Deaths** | 1.80% | | | 1.96% | | |

Cases and Deaths following administration of COVID-19 monovalent and bivalent mRNA vaccines.

Table S5. Summary of spike mRNA gene therapy product associated deaths reported to VAERS by year with proportions of deaths cited with COVID-19.

**Supplemental Table 5. Summary of spike mRNA gene therapy product associated deaths reported to VAERS by year with proportions coded with COVID-19.***

| YEAR | Number of Deaths | % of Total Deaths (2020-2025) | Number of Deaths Citing COVID-19 | COVID-19 Cases % of Total Deaths (2020-2025) | % of Total Yearly Deaths Citing COVID-19 |
|---|---|---|---|---|---|
| **2020** | 111 | 0.39% | 5 | 0.02% | 4.50% |
| **2021** | **20313** | **70.70%** | **3684** | **12.82%** | 18.14% |
| **2022** | 6222 | 21.66% | 2802 | 9.75% | **45.03%** |
| **2023** | 1443 | 5.02% | 279 | 0.97% | 19.33% |
| **2024** | 418 | 1.46% | 26 | 0.09% | 6.22% |
| **2025** | 221 | 0.77% | 11 | 0.04% | 4.98% |
| **Total** | 28728 | 100.00% | 6807 | 23.69% | N/A |

* For monovalent and bivalent spike mRNA gene therapy products up to January 2, 2026. The National Vaccine Information Center portal to VAERS data was accessed at https://medalerts.org on January 19, 2026.

N/A = not applicable.

**Figure S1. Onset Interval DATA on COVID-19 Deaths and by Dose reported to VAERS** Permission to reproduce by **CC-by 4.0**



FOR ALL COVID-19 VACCINES

% of Known intervals for deaths

Ratings of the 1-3 doses or unknown

Worst

Best

one dose

| | | | | % of known intervals | Rating |
|---|---|---|---|---|---|
| 0 Days | 1324 | 3.49% | 11.6% | | |
| 1 day | 1,251 | 3.30% | 10.9% | | |
| 2 days | 631 | 1.66% | 5.5% | | |
| 3 days | 487 | 1.28% | 4.3% | | |
| 4 days | 346 | 0.91% | 3.0% | | |
| 5 days | 306 | 0.81% | 2.7% | | |
| 6 days | 249 | 0.66% | 2.2% | | |
| 7 days | 269 | 0.71% | 2.3% | | |
| 8 days | 202 | 0.53% | 1.8% | | |
| 9 days | 185 | 0.49% | 1.6% | Worst | |
| 10-14 days | 772 | 2.04% | 6.7% | Worst | |
| 15-30 days | 1,341 | 3.54% | 11.7% | Worst | |
| 31-60 days | 710 | 1.87% | 6.2% | Best | |
| 61-120 days | 630 | 1.66% | 5.5% | Best | |
| Over 120 days | 2,752 | 7.26% | 24.0% | | |
| Unknown | 1,845 | 4.87% | | | |
| Total | 13,300 | 35.08% | | | |
| | 11,455 | | | | |

Total - unknown

two dose

| | | | | % of known intervals | Rating |
|---|---|---|---|---|---|
| 0 days | 1,255 | 3.31% | 9.6% | | Best |
| 1 day | 949 | 2.50% | 7.3% | | Best |
| 2 days | 399 | 1.05% | 3.1% | | Best |
| 3 days | 232 | 0.61% | 1.8% | | Best |
| 4 days | 199 | 0.52% | 1.5% | | Best |
| 5 days | 168 | 0.44% | 1.3% | | Best |
| 6 days | 125 | 0.33% | 1.0% | | Best |
| 7 days | 141 | 0.37% | 1.1% | | Best |
| 8 days | 91 | 0.24% | 0.7% | | Best |
| 9 days | 107 | 0.28% | 0.8% | Tie for Best | |
| 10-14 days | 433 | 1.14% | 3.3% | | Best |
| 15-30 days | 929 | 2.45% | 7.1% | | Best |
| 31-60 days | 927 | 2.45% | 7.1% | | |
| 61-120 days | 1,145 | 3.02% | 8.8% | | |
| Over 120 days | 5,974 | 15.76% | 45.7% | | Worst |
| Unknown | 1,322 | 3.49% | | | |
| Total | 14,396 | 37.97% | | | |
| | 13,074 | | | | |

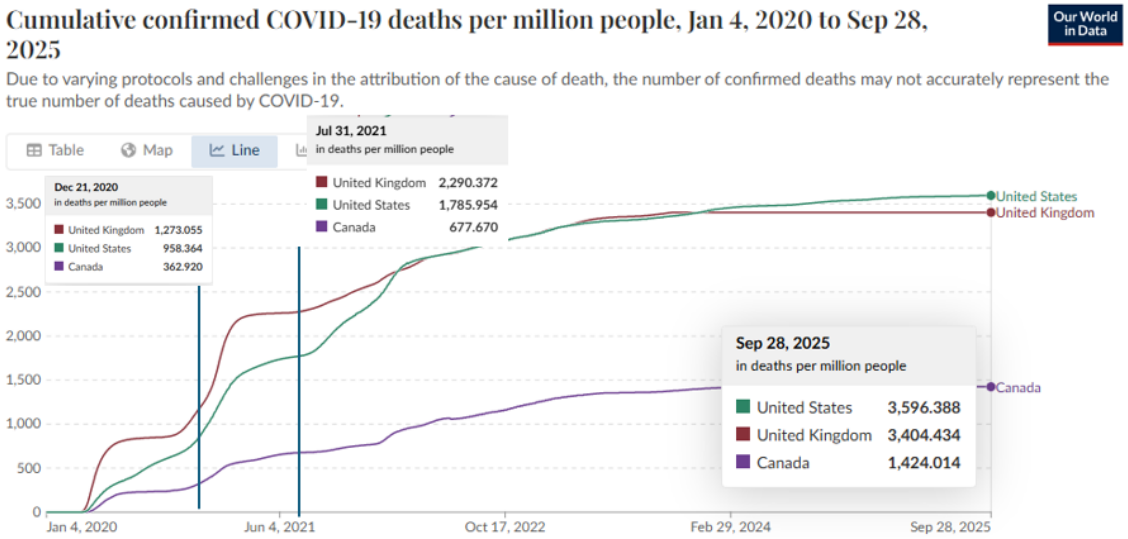
Unknown

| | | | | % of known intervals | Rating |
|---|---|---|---|---|---|
| 0 days | 725 | 1.91% | 14.4% | | |
| 1 day | 627 | 1.65% | 12.4% | | Worst |
| 2 days | 336 | 0.89% | 6.7% | | Worst |
| 3 days | 244 | 0.64% | 4.8% | | Worst |
| 4 days | 158 | 0.42% | 3.1% | | Worst |
| 5 days | 169 | 0.45% | 3.4% | | Worst |
| 6 days | 124 | 0.33% | 2.5% | | Worst |
| 7 days | 132 | 0.35% | 2.6% | | Worst |
| 8 days | 98 | 0.26% | 1.9% | | Worst |
| 9 days | 72 | 0.19% | 1.4% | | |
| 10-14 days | 322 | 0.85% | 6.4% | | |
| 15-30 days | 551 | 1.45% | 10.9% | | |
| 31-60 days | 348 | 0.92% | 6.9% | | |
| 61-120 days | 344 | 0.91% | 6.8% | | |
| Over 120 days | 793 | 2.09% | 15.7% | | |
| Unknown | 3,664 | 9.66% | | | |
| Total | 8,707 | 22.97% | | | |
| | 5,043 | | | | |

third dose

| | | | | % of known intervals | Rating |
|---|---|---|---|---|---|
| 0 days | 869 | 2.29% | 23.6% | | Worst |
| 1 day | 348 | 0.92% | 9.5% | | |
| 2 days | 123 | 0.32% | 3.3% | | |
| 3 days | 98 | 0.26% | 2.7% | | |
| 4 days | 59 | 0.16% | 1.6% | | |
| 5 days | 63 | 0.17% | 1.7% | | |
| 6 days | 45 | 0.12% | 1.2% | | |
| 7 days | 54 | 0.14% | 1.5% | | |
| 8 days | 46 | 0.12% | 1.2% | | |
| 9 days | 31 | 0.08% | 0.8% | Tie for Best | |
| 10-14 days | 162 | 0.43% | 4.4% | | |
| 15-30 days | 280 | 0.74% | 7.6% | | |
| 31-60 days | 264 | 0.70% | 7.2% | | Worst |
| 61-120 days | 371 | 0.98% | 10.1% | | Worst |
| Over 120 days | 869 | 2.29% | 23.6% | | |
| Unknown | 496 | 1.31% | | | |
| Total | 4,178 | 11.02% | | | |
| | 3,682 | | | | |

**Figure S2. Evidence that postponing the second COVID-19 Vaccine dose in Canada by 4 months, flattened the overall COVID-19 death curve when compared with the USA (no delay) and the UK (initial 3 month delay).**




**Suppl. Figure 2. Canada Flattened the Curve by Postponing the Second Dose for 4 Months.** [99]

Canada, on the advice of **Dr. Danuta Skowronski** at the British Columbia Centre for Disease Control wisely postponed the second dose of the spike mRNA gene therapy shots for up to 4 months (due to shortages of supply), which would have RETAINED innate immunity (1st dose), natural immunity, and HERD IMMUNITY for much longer potentially flattening the curve to control the pandemic. A main benefit would have been the establishment of trained immunity in third parties (not vaccinated and not exposed) by HERV-K102 protector particles allegedly shed from the URT for 3 to 4 months from those who received the first dose only. Data from Our World in Data CC by 4.0. Author retains the copyrights from the sworn testimony (reference [99] ).