

## When Covid-19 Vaccine Benefits are Rarer Than Rare Adverse Effects

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**Article Info****Received:** January 01, 2026**Accepted:** January 05, 2026**Published:** January 08, 2026**\*Corresponding author:** Raphael Lataster, The University of Sydney, Camperdown, Australia.**Citation:** Raphael Lataster. (2026) "When Covid-19 Vaccine Benefits are Rarer Than Rare Adverse Effects.", International Clinical Research and Clinical Trials, 1(1); DOI: 10.61148/ICRCT/001**Copyright:** © 2026. Raphael Lataster. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.**Abstract:**

Striking research published recently in *Vaccine* should raise concerns around ongoing claims that the COVID-19 vaccines are worth the risk, for all. Raethke et al. found a rate of serious ADRs of 0.24% for the primary series and 0.26% for boosters, Approximating to 1 serious ADR per 400 people. An unofficial 'series' of 4 articles appearing in the *Journal of Evaluation in Clinical Practice*, the last of which was published this year, outlines many concerns about counting windows and how these can significantly impact effectiveness and safety estimates of the vaccines (whilst also highlighting research indicating vaccine-associated myocarditis rates of 1 in several thousand). One wonders if the conclusions of Raethke et al. would be more alarming if different counting windows were employed.

**Keywords:** covid-19 vaccine

Furthermore, a "cohort study of 99 million vaccinated individuals" by Faksova et al. conclusively demonstrates that the vaccines are associated with "myocarditis, pericarditis, Guillain-Barré syndrome, and cerebral venous sinus thrombosis", and point to additional safety signals. Perhaps more AESIs would have been found with counting windows extending beyond "42 days following vaccination". Likewise with the reanalysis of the mRNA COVID-19 vaccine clinical trials carried out by Fraiman et al., who found that "the mRNA vaccines were associated with an excess risk of serious adverse events of special interest of 12.5 per 10,000 vaccinated".

Contrast this with UK government estimates of numbers needed to vaccinate to prevent a severe COVID hospitalisation being in the hundreds of thousands for young 'no risk' groups. I'm no mathematician, but, making do with incomplete data and possibly flawed analyses, wouldn't serious adverse effects occurring at a rate of 1 in several hundred be a terrible trade-off for benefits against severe COVID-19 occurring at a rate of 1 in several hundred thousand? And by a lot? Should this not merit reanalyses of claims that the benefits of the COVID-19 vaccines still outweigh the risks, particularly for the young and healthy? The adverse effects of the COVID-19 vaccines may indeed be rare, but it appears that severe COVID in the young and healthy is rarer still.

**References:**

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