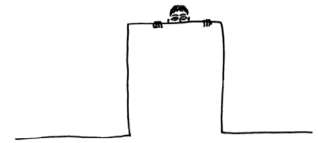


HEADS UP

edited by Craig Mellis (craig.mellis@sydney.edu.au)**Lives saved by COVID-19 vaccines**

Outside clinical trials, the first COVID-19 vaccine was administered on 8 December 2020. Researchers aimed to quantify the global impact of the first year of COVID-19 vaccination programmes using mathematical modelling to fit COVID-19 transmission and vaccination to reported COVID-19 mortality and all-cause excess mortality in 185 countries and territories.¹ They determined the number of lives lost if there had been no vaccines. Based on reported COVID-19 deaths, vaccinations prevented an estimated 14.4 million deaths (95% credible interval [CrI] 13.7–15.9) from COVID-19 in a year. However, if excess deaths were used, this estimate rose to 19.8 million (95% CrI 19.1–20.4) deaths prevented (Fig. 1), equating to a global reduction of 63% in total deaths (19.8 million of 31.4 million) during the first year of COVID-19 vaccination. Delivery of vaccines to low-income countries has been far lower than promised.² In COVID-19 Vaccines Global Access (COVAX) Advance Market Commitment countries, an estimated 7.4 million [95% CrI 6.8–7.7] of 17.9 million excess deaths were prevented, but millions more lives could have been saved with better coverage. COVID-19 vaccination altered the pandemic course, saving tens of millions of lives globally. However, vaccines had less effect in low-income countries due to inadequate access, emphasising the importance of global vaccine equity.

References

- 1 Watson OJ *et al.* Global impact of the first year of COVID-19 vaccination: A mathematical modelling study. *Lancet Infect. Dis.* 2022; **22**: 1293–302.

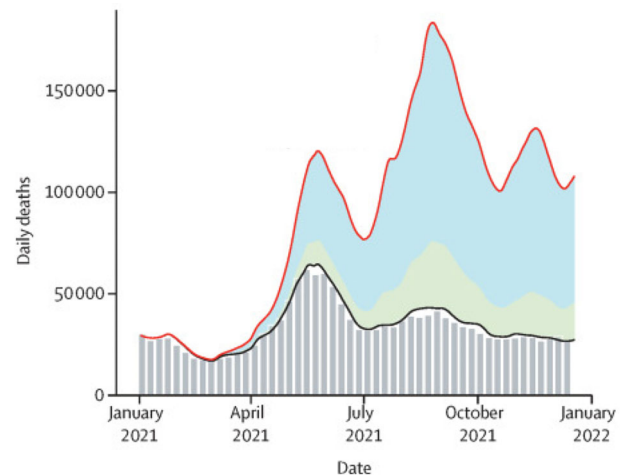


Fig. 1 Median number of daily COVID-19 deaths based on excess mortality estimates (grey vertical bars) in the first year of vaccination and modelled numbers of deaths averted. (■), Excess mortality data; (—), model fit to excess mortality; (—), model fit without vaccines; (■), deaths averted by vaccines (direct); (■), deaths averted by vaccines (indirect).

- 2 Isaacs D. Fortune favours the rich – The iniquity of inequity. *J. Paediatr. Child Health* 2022; **58**: 1128–9.

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