



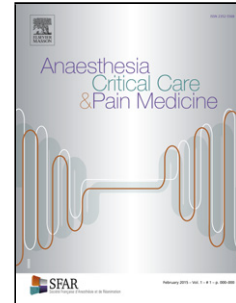
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SARS-CoV-2 vaccination efficacy on hospitalisation and variants

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SARS-CoV-2 vaccination efficacy on hospitalisation and variants

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We report data regarding vaccination (1st dose and 2nd dose, *i.e.*, “full vaccination”) and
hospitalisation for COVID-19 in three countries in Europe between the 1st of January and the
15th of April 2021. We chose three countries with similar healthcare systems, which had

three different vaccination strategies: rapid full vaccination (Israel), rapid first-dose vaccination (United Kingdom), and a delayed vaccination strategy (France).

These data (showed in the **Figure 1**) are coming from official dataset, freely available on <https://ourworldindata.org>.

They strongly suggest that the speed of vaccination (1st dose) is the main determinant in reducing COVID-related hospitalisations. Nevertheless, these data should be use with caution. Indeed, several other parameters differed between the three countries such as restrictive measures (*e.g.*, lockdown, curfew, travel restrictions...) or the relative proportion of SARS-CoV-2 variants circulating (*e.g.*, the B.1.1.7. strain in the United Kingdom) and were not precisely considered.

We then present a simplified table summarising data regarding the three main vaccines used in Europe, for which both laboratory and clinical data on the original “Wuhan” SARS-CoV-2 strain and the main variants of interests (*i.e.*, “UK”, “South African”, and “Brazilian” variants) are available [1-8]. These data should be interpreted with caution as new data are becoming available rapidly and in vitro testing may not be clinically validated in phase III clinical trials or real-life populations.

Conflicts of interest: The authors have no conflicts of interest to declare

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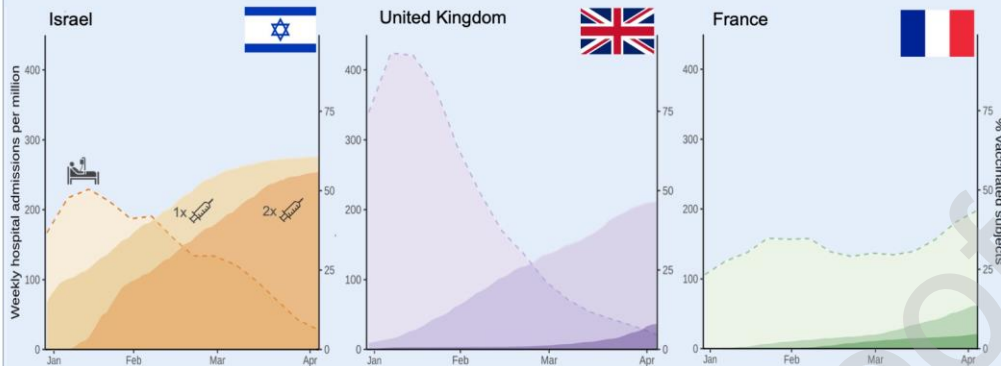
SARS-CoV-2 vaccination efficacy on hospitalization and variants

S. Rozencajg, A. Blet, A. Lamer, M. Boisson, T. Clavier, O. Abou-Arab on behalf of the Some team of ACCPM

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VACCINATION EFFICACY ON HOSPITALIZATION

We report data regarding three countries with similar healthcare systems which had three different vaccinal strategies between 1st of January and 10th of April 2021: rapid full vaccination (Israel), rapid first-dose vaccination (United Kingdom), and a delayed vaccination strategy (France).



These data suggest that the speed of vaccination (1st dose) seems to be the main determinant in reducing COVID-related hospitalizations. Restrictive measures (e.g., lockdown, curfew, travel restrictions...) differed between the three countries and are not illustrated in these graphs.

VACCINATION EFFICACY ON VARIANTS [1-8]

	Pfizer-BioNTech (BNT162b2 mRNA)	Moderna (mRNA-1273)	AstraZeneca (AZD1222)
Number of injections	2 (21 days appart)	2 (28 days appart)	2 (28 days appart)
SARS-CoV-2 (Wuhan strain)	95%	94%	62-90%
B.1.1.7 (United Kingdom)	Efficient in real life (Israel)	Similar or 1-2 time(s) less effective	71%
B.1.351 (South Africa)	1-35 time(s) less effective	3-20 times less effective	22%
B.1.1.28/P.1 (Brazil)	4-6 times less effective	4-5 times less effective	No data

■ Efficient ■ Probably less efficient ■ Probably less or non efficient
🧬 mRNA vaccine 🧬 Adenovirus vaccine 🧬 Human data 🧬 In vitro data

These data should be interpreted with caution as new data are becoming available rapidly and *in vitro* testing may not be clinically validated in phase III clinical trials or real-life populations.



Fig no 1