



PEER-REVIEW REPORT

Name of journal: *World Journal of Meta-Analysis*

Manuscript NO: 83514

Title: Systematic review to determine the real-world effectiveness of mRNA COVID-19 vaccines in the elderly during the predominance of Delta and Omicron variants

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02529007

Position: Editorial Board

Academic degree: PhD

Professional title: Academic Editor, Professor, Senior Scientist

Reviewer's Country/Territory: Iran

Author's Country/Territory: United States

Manuscript submission date: 2023-01-28

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-03-08 13:02

Reviewer performed review: 2023-03-08 13:39

Review time: 1 Hour

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Manuscript ID 83514 entitled, “A systematic review to determine the real-world effectiveness of mRNA COVID-19 vaccines in the elderly during the predominance of Delta and Omicron variants” is a systemic review on Published and pre-print Observational studies (cohort, case control, and cross-sectional) from 01 January 2021 – 31 December 2022 with the aim of determining the effectiveness (real world) of mRNA COVID-19 vaccines in the elderly during the predominance of Delta and Omicron variants in preventing COVID-19 related infection, hospital, ICU admission and intubation, and death.. Results showed that vaccine effectiveness in real-world settings, is marginally lower (compared to the declared efficacies) against infection (40% - 89%), hospitalization (92%), ICU admission and intubation (98% - 85%), and death (87%) with indication of diminished effectiveness of vaccine over time. Furthermore, 2 doses of mRNA vaccines are inadequate and only provides interim protection against COVID-19 infection, hospitalization, ICU admission and intubation, and deaths. Therefore, this study concluded that due to the natural diminishing effectiveness of the vaccine, the need for booster dose to restore its efficacy is vital. Comments: The manuscript is



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relatively well-written and organized. Systemic reviews of this kind provide valuable information for future vaccination strategies. However, the main concern about this manuscript is lack of comparison of their study (source of data, methodology, results) with other recently published systemic reviews and meta analyses. For example in a very recent systemic review, authors published their study on the Effectiveness (real world) of mRNA and viral-vector vaccines in epidemic period led by different SARS-CoV-2 variants (including Delta and Omicron) and including the elderly people which is a great study that includes almost all studied items of the presently submitted manuscript (Jun Zhang et al, Effectiveness of mRNA and viral-vector vaccines in epidemic period led by different SARS-CoV-2 variants: a systematic review and meta-analysis, *J Med Virol*, 2023 Feb 28. doi: 10.1002/jmv.28623). Therefore this published study should have been well addressed and cited in the present submission and their study (source of data, methodology, results) should have been compared. There are still several other recently published systemic reviews that should have been addressed and compared. Some examples are: - Clara Mazagatos et al, Effectiveness of mRNA COVID-19 vaccines in preventing SARS-CoV-2 infections and COVID-19 hospitalisations and deaths in elderly long-term care facility residents, Spain, weeks 53 2020 to 13 2021, *Euro Surveill*. 2021 Jun;26(24):2100452. - Ramandip Grewal et al, Effectiveness of mRNA COVID-19 vaccine booster doses against Omicron severe outcomes. *Nat Commun*. 2023 Mar 7;14(1):1273. doi: 10.1038/s41467-023-36566-1. - Zejun Li et al, Efficacy, immunogenicity and safety of COVID-19 vaccines in older adults: a systematic review and meta-analysis, *Front Immunol*. 2022 Sep 13;13:965971.



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Reviewer's code: 05356714

Position: Editorial Board

Academic degree: PhD

Professional title: Associate Professor

Reviewer's Country/Territory: Indonesia

Author's Country/Territory: United States

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Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-03-19 13:22

Reviewer performed review: 2023-03-23 00:16

Review time: 3 Days and 10 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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Scientific significance of the conclusion in this manuscript	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The topic of this paper is of high interest as the issue of COVID-19 vaccines effectiveness in the real world. Similar study also report elsewhere. But, COVID-19 as always, is the top topic to study till the end. Overall, the study was well-conducted and the authors clearly explained the findings meticulously.