Peer-Review Report

Peer Review Report of "Artificial Intelligence in Public Health: Integrated SPAR-4 Systematic Literature Review and Bibliometric Analysis"

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Keywords: artificial intelligence; public health; systematic literature review; research themes; bibliometric analysis

This is a peer review report for "Artificial Intelligence in Public Health: Artificial Intelligence in Public Health: Integrated SPAR-4 Systematic Literature Review and Bibliometric Analysis."

Round 1 Review

General Comments

This paper [1] aims to systematically review artificial intelligence applications in public health, categorizing research into thematic clusters and identifying gaps. This systematic review is timely but methodologically weak due to an incomplete protocol, no quality assessment, and limited databases searched.

Specific Comments

Major Comments

1. The review relies solely on Web of Science, which, while comprehensive for multidisciplinary topics, excludes key health-specific databases like PubMed/MEDLINE, Embase, and Scopus. Web of Science may underrepresent clinical or epidemiological studies published in medical journals. For instance, PubMed often captures more granular public health research on artificial intelligence in disease surveillance or health equity. Why not a multidatabase approach to minimize bias?

2. From Multimedia Appendix 1, we know the search term used ("artificial intelligence and public health"), but it is overly broad and simplistic, potentially missing nuanced synonyms. It would be better to separate "artificial intelligence" from "public health." The syntax ("... 2021 or 2022 or 2023 or 2024 or 2025 or 2026 (Publication Years) ...") appears malformed. Publication years should be filtered separately, not conjoined with "and/or" operators, which could lead to incomplete results. Time restriction to 2021 to 2025 is justified by the "surge" post-ChatGPT (2022), but artificial intelligence in public health predates this (eg, early machine learning for outbreak prediction in the 2010s). Excluding pre-2021 literature ignores foundational work, potentially skewing clusters toward recent trends (eg, large language models) and underestimating long-term impacts. This should be discussed in the Discussion.

Also, 2026's publication is ahead of the current review date of October 18, 2025. A search strategy including 2026's publication by a review done in 2025 will definitely be incomplete, and this method would miss multiple important studies to be published in Q4 of 2025 and all of 2026. It is also unclear if Boolean operators were optimized or if a librarian was consulted, a best practice in health systematic literature reviews.

3. The paper mentions following protocols in Figure 1, but does not explicitly state criteria. For example, were only English-language articles included? Did they exclude non–peer-reviewed sources or gray literature (eg, World Health Organization reports on artificial intelligence ethics)?

4. For co-occurrence analysis via VOSViewer, the keyword threshold (25 occurrences) and link limit (200) seem arbitrary. Please elaborate further on how these cutoffs were chosen.

5. It would be good if a quality assessment of the included studies is mentioned. Since a huge amount of publications were included, tools like the Quality Assessment of Diagnostic Accuracy Studies – version 2 (QUADAS-2) for diagnostic artificial intelligence studies or the Mixed Methods Appraisal Tool (MMAT) for mixed methods studies could have evaluated the risk of bias, validity, or generalizability

to narrow down the final search results for a more in-depth systematic review on the topic.

6. In the Conclusion, the authors just summarized clusters and gaps and work the manuscript has gone through. There is no valid conclusion after all the research is presented. I would suggest to revise it and add in recommendations for practitioners, policymakers, or clinicians; for example, should public health agencies adopt specific artificial intelligence tools? Also, the conclusion might add in a call for high-quality trials (eg, randomized controlled trials of artificial intelligence public health interventions).

Round 2 Review

General Comments

This paper has been revised according to the comments; my concerns were addressed. It will help readers to have a better understanding of the current landscape of artificial intelligence in public health.

Conflicts of Interest

None declared.

References

1. Dasgupta A, Xue Y, Tao K. Artificial intelligence in public health: Integrated SPAR-4 systematic literature review and bibliometric analysis. JMIRx Med. 2026;7:e85709. [doi: 10.2196/85709]

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