

# Review of: "Retraction Note: Population-level counterfactual trend modelling to examine the relationship between smoking prevalence and e-cigarette use among US adults"

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Potential competing interests: No potential competing interests to declare.

This is a review of a retraction decision by a journal, not the retracted paper.

The conduct of the journal BMC Public Health, in this case, is extraordinary and disturbing. Having accepted and published the Foxon et al. (2022) paper<sup>[1]</sup> following a reasonable peer review process, the editors have now retracted it based on criticisms without any scientific basis.<sup>[2]</sup>

The Foxon et al. paper draws an important public health conclusion:

*Population-level data suggest that smoking prevalence has dropped faster than expected, in ways correlated with increased e-cigarette use. This population movement has potential public health implications.*

Though such a study cannot establish causality, the analysis adds to a body of confirmatory evidence that suggests that e-cigarettes may be positive for public health and help to address the burden of disease and death caused by smoking. It triangulates well with other studies, such as Levy et al. (2021)<sup>[3]</sup>, Wagner & Clifton (2021)<sup>[4]</sup>, and Levy et al. (2023)<sup>[5]</sup> and is aligned with findings from randomised controlled trials, as assessed by the Cochrane Review.<sup>[6][7]</sup>

The journal provides only a minimal explanation of its justification for the retraction:<sup>[2]</sup>

*A post-publication review highlighted concerns about the assumption of '0' prevalence of e-cigarette use in 2010 which contradicts available data; this assumption is not fully supported by the sensitivity analyses performed by the authors.*

It is important, therefore, to be clear about the basis for this asserted argument:*there is none.*

1. There is no basis to retract this paper or even correct it, and none has been provided by anyone involved - the original anonymous critic, the editorial board, the journal editors, or the publisher. The editors have not published the "post-publication review" on which the journal is relying to support its retraction. Nor has it explained why it believes the authors' sensitivity analysis does not support the authors' analysis.
2. In contrast, the authors have gone the extra mile in openly demonstrating that the supposed error that forms the

editors' basis for retraction is not an error but a reality-based assumption supported by the data available at the time and reviewed subsequently (the level of vaping in 2010 was *de minimus* - about 0.3%).<sup>[8]</sup>

3. Further, the authors have shown through a sensitivity analysis that the overall findings are robust, with different dates assumed for the 'zero' prevalence of vaping starting from 2006.<sup>[9]</sup> The reality-based initial assumption used by the authors, combined with their sensitivity analysis, is a sufficient "belt and braces" validation to entirely invalidate the journal's supposed case for retraction.
4. The editors at BMC Public Health have failed to respond to any of the substantive arguments or questions raised by the authors and detailed extensively on PubPeer<sup>[10]</sup> or through the extensive correspondence between authors and the journal openly documents at OSF.<sup>[9]</sup> The journal has not, and cannot, provide a justification for the retraction. The journal even refused when a justification was respectfully requested by twenty-three independent experts in the field (including this reviewer).<sup>[11]</sup>
5. Further, the editors have changed the purported basis for the retraction, initially arguing wrongly and without any foundation that the results became non-significant if different assumptions were used. They have dropped this false claim without explanation but maintained the decision to retract.
6. The original author of the letter criticising the paper remains anonymous, in theory at least, and his analysis has not been made available for public criticism or open review post-publication. If it was made public, it would fail for the same reasons. The asymmetry in the treatment of the authors and treatment of their critics and the editorial board is improper and disturbing.

The authors summarised the situation in their letter to the journal of 18 September 2023.<sup>[9]</sup>

*Thus, the retraction is based on fundamental misconceptions regarding basic elements of our article. Our attempts to provide evidence-based justifications of our methodological decisions and findings have been met with unfounded assertions and conclusions that do not appear to be supported by evidence.*

*The journal has still, many weeks on from its decision to retract, not presented authors or readers with any reanalysis of the publicly-available data that would show any real flaw in the analysis, nor demonstrated that some other approach would have materially changed the conclusions, nor has the journal provided a transparent, detailed description of the process through which it came to its decision besides an unspecified "review" of unsupported opinions from a single anonymous editorial board member.*

I cannot fault this description.

It is difficult to determine what is motivating such an egregious editorial conduct at BMC Public Health. It seems plausible that the authors' status as consultants for the company Juul Labs Inc. has somehow emboldened the journal to act politically, and to purge the literature of findings that some tobacco control activists find unwelcome. The editors have not given any other remotely plausible reason, so only explanations of this form are available to fill the analytical void they have created.

If this is the case, it would be dangerous and anti-scientific. The finding that vaping may be displacing smoking among nicotine users and thereby providing potentially very significant harm reduction benefits is extremely important and positive for public health, even if that analysis was undertaken by consultants to an economic actor in the field. Their analysis is replicable and contestable, and it is based on publicly available data. If there are doubts about the analysis or concerns about bias or the integrity of the authors, then replication or a counter-analysis is the way forward in the era of open science, not an opaque and evidence-free retraction.

Having a 'public health' journal seemingly suppress a paper on the basis of the provenance of the authors or the discomfort arising from the findings really is disturbing, to say the least. It should cause the editors to consider their mission and whether they are approaching their role with due regard for scientific integrity and publication ethics.

## References

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- <sup>2</sup> <sup>a, b</sup> Floe Foxon, Arielle Selya, Joe Gitchell, Saul Shiffman. (2023). *Retraction Note: Population-level counterfactual trend modelling to examine the relationship between smoking prevalence and e-cigarette use among US adults*. *BMC Public Health*, vol. 23 (1). doi:10.1186/s12889-023-16800-7.
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- <sup>4</sup> <sup>a</sup> Lucia M. Wagner, Sara M. Clifton. (2021). *Modeling the public health impact of e-cigarettes on adolescents and adults*. doi:10.1063/5.0063593.
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- <sup>6</sup> <sup>a</sup> Jamie Hartmann-Boyce, Nicola Lindson, Ailsa R Butler, Hayden McRobbie, et al. (2022). *Electronic cigarettes for smoking cessation*. doi:10.1002/14651858.cd010216.pub7.
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- <sup>8</sup> <sup>a</sup> Robert C. McMillen, Mark A. Gottlieb, Regina M. Whitmore Shaefer, Jonathan P. Winickoff, et al. (2014). *Trends in Electronic Cigarette Use Among U.S. Adults: Use is Increasing in Both Smokers and Nonsmokers*. *NICTOB*, vol. 17 (10), 1195-1202. doi:10.1093/ntr/ntu213.
- <sup>9</sup> <sup>a, b, c</sup> Foxon et al.. (2023). *Correspondence re: BMC Public Health article 'Population-level counterfactual trend modelling to examine the relationship between smoking prevalence and e-cigarette use among US adults'*. OSF.

10. <sup>^</sup> *Foxon et al. and others. (2023). PubPeer comments on BMC Public Health journal intention to retract Foxon et al.. PubPeer.*
11. <sup>^</sup> *Niaura et al.. (2023). Expression of concern about the proposed retraction of Foxon et al. paper regarding the relationship between smoking prevalence and e-cigarette use among US adults. New York University School of Global Public health.*