23 October 2023

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| THE EDITORS,  Pharmacoeconomics. |

Dear Editors,

Please find the attached manuscript entitled “A prototype software framework for transparent, reusable and updatable computational health economic models” for your consideration as an Original Research Article of PharmacoEconomics. This paper describes the rationale, development and application of novel software for improving the computational implementation of health economic models.

Our authorship team believe that this paper is potentially of wide interest to health economists and computational modellers in other health and economic disciplines. Although there is growing interest in making the computational implementations of health economic models more widely accessible, there are a number of practical barriers to realising this aspiration. These barriers include underdeveloped understanding of the ethical dimensions of implementing health economic models as software, inadequate tools for implementing open source computational health economic models and institutional factors such as how health economic modelling projects are funded. The research we describe in the submitted manuscript provides original contributions to identifying relevant ethical considerations and the development of software to help overcome some technical barriers to ethical computational modelling. The manuscript also discusses these contributions in the context of some of the institutional factors that we suggest should be addressed by research funders.

Our manuscript also provides an overview of how we have used our prototype software framework to implement a utility mapping study in youth mental health. That overview focuses on the software output of that study. A detailed description of the utility mapping study is described in a separate manuscript that we plan to submit to PharmacoEconomics later this week.

The research we describe was funded by an Australian Government Research Training Program (RTP) Scholarship, Australia’s National Health and Medical Research Council (NHMRC, APP1076940), Orygen, VicHealth, Victoria University and headspace. However, the preparation of this manuscript and submission for publication was not contingent on approval by the sponsoring organisations. All of the authors have read and approved the paper and it has not been published previously nor is it being considered by any other peer-reviewed journal. A copy of the manuscript has been submitted to the arxiv.org pre-print repository.

We think that our study would be of interest to your readers and is potentially influential in future health economic modelling practice.

Thank you for your consideration of this work.

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| Sincerely, |

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