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Prof Alan J Schwartz,

University of Illinois, Chicago, United States

Dear Prof Schwartz,

Please find attached my manuscript, “Honest outcome mapping: using statistical simulation to map health consequences onto a common scale”, co-written with Professor Matt Stevenson (University of Sheffield, UK) and Dr Ralph Crott (Catholic University of Louvain, Brussels, Belgium).

This manuscript describes a simulation-based approach adopted to combine information on health outcomes reported using different disease severity scales. The approach was used as part of a discrete event simulation model developed for a health technology assessment (HTA) report which evaluated the clinical and cost-effectiveness of using echocardiography to improve patient management for patients with newly diagnosed atrial fibrillation (AF).

AF predisposes patients to an increased risk of stroke. Providing AF patients with oral anticoagulants (OACs) reduces this stroke risk, but also introduces a nontrivial risk of intracranial haemorrhage (ICH), which in some cases can be as or more harmful than the strokes they aim to prevent. We therefore wanted estimates of the cost and consequences of both stroke and ICH caused by trying to prevent stroke with OAC to be based on the same patient population. With the approach described, we were able to do this, but the potential applications are much wider.

Our results suggest that the health related quality of life estimates used in economic evaluations for dependent strokes may be out of date and in need of revision. This is because they are based on data recorded more than two decades ago, and it is expected that outcomes following stroke have improved due to improved quality of stroke care. Our indirectly produced estimates appear to reflect these improvements. We would be happy to adjust the emphasis slightly towards this clinical implication if that would be considered of greater interest to the MDM readership.

We look forward to your response to our manuscript.

Yours sincerely,

Jon Minton

On behalf of Jon Minton, Matt Stevenson, Ralph Crott