Reviewer’s report

Title: Identifying Older Adults at Risk of Harm Following Elective Surgery: A Systematic Review and Meta-Analysis

Version: 0 Date: 07 Aug 2017

Reviewer: Sandhya Lagoo-Deenadayalan

Reviewer's report:

This is a commendable body of work spanning several decades of clinical research targeted at understanding and identifying unique problems faced by geriatric surgery patients and helps inform the direction we need to take to mitigate these issues.

The authors have developed a robust list of study questions and the literature search and abstraction methods are excellent, as also the statistical analysis. They have been careful about statistical heterogeneity between models. The applicability of their results has tremendous impact - they show that age alone is not a factor that determines the incidence of post-operative complications, but rather the biological effects of aging. While this may vary in the time of occurrence in every patient, the manifestation of such aging is always the same - frailty. Showing that frailty, cognitive and functional decline are key risk factors that predict adverse post-operative outcomes in a diverse variety of elective surgical procedures, is the major strength of this meta-analysis.

I recommend that this manuscript be accepted for publication.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
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Yes
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If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
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