Reviewer’s report

Title: World-wide research architecture of vitamin D research: density-equalizing mapping studies and socio-economic analysis

Version: 1 Date: 08 Nov 2017

Reviewer: Kerry Jones

Reviewer's report:

Overall the paper is improved and easier to follow. However, I have a number of comments.

Many of the additional references have not been formatted correctly.

Abstract. Line 13. Insert 'awareness' in Since awareness of vitamin D …

Intro:

Whilst appropriate to use vitamin D in terms of sufficiency and insufficiency, the use of specific forms would be more appropriate when discussing levels/concentrations, i.e. 25OHD.


Lines 42 - 47. By setting a target of 105 nmol/l this reference does not follow the balance of evidence in the literature and no policy makers set population or individual levels anywhere near this concentration. Please revise.

Page 6, lines 23-28. This paragraph attempts to summarise, I think, the position of vitamin D research today and attempts to respond to the comments from Reviewer 1. However, this is a difficult in such a short paragraph and I do not feel is totally necessary here without proper discussion of where the vitamin D field is and where it is going

The use of more up to date references to support the assertions made in this paragraph would help; there are plenty of reviews that discuss the state of VD research and priorities for research.

Why is "vitamin D" in inverted commas here?
Line 40. 'number' not 'numbers'. Line 42. Delete 'until today'

Line 40 - 49. I think your aims can extend beyond assessing the global research, because you also identify gaps in research endeavor.

Page 7. Line 31. 'was' rather than 'has been'. Line 32. 'has been' rather than 'was'.

Lines 38 - 44. I think this is stating that the newQIS techniques have been standardized since its inception. Rephrase these last two sentences to "The use of standardized techniques for data analysis with the NewQIS platform allows for the reliable….etc"

Page 8. Lines 14-16. Could be shortened to "NewQIS is able to extract data from either PubMed or WoS databases. For this…” etc

Page 10. Line 46. Use "As previously described for NewQIS studies in osteoporosis and other diseases…” etc

Line 50. Insert 'The' at the start of the sentence.

Page 11. Line 31. "If at least two authors came from different countries" rather than "were coming from"

Page 12. Line 15. "with regard" rather than "regarding"

Page 13. Line 28. There is must be an error in Australia's output (quoted as  n=8795).

Lines 45. Delete "retrospectively"

Page 17. Line 13-14 - there is a mistake in the dates: "1964-1964"?

Lines 11-17. These sentences could be simplified "This analysis showed an increase in the subject area of 'Endocrinology and Metabolism increasing from 10% in 1960-65 to 30% of published articles in the period 1990-94."
Page 20. Line 11. "We explain this finding…” This data is not presented so I don't think it is a finding.

Page 23. Lines 49-51 The sentence starting "Hence…” does not read well. Could this sentence be added to the end of the prior sentence. e.g. …and is of relevance to healthcare systems worldwide

Page 24. Line 1. Methods and awareness of the issues are improved over the last few years. You could cite the work of the VDSP here.

Page 24. Line 15. The focus here is on vitamin D status rather than 'disease burden' which is rather vague.

Page 24. Line 43/44. As in the abstract 'awareness of vitamin D deficiency is increasing’ rather than prevalence.

There is no Figure 5 so I cannot comment on its content.

Table 1 heading. 'Features' not 'feature'

I am still not clear why the tables are ranked how they are (it looks like by ranking 3, but why?) and there do not appear to be any table legends which would help.

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