Reviewer’s report

Title: Health care use and costs at the end of life: A comparison of elderly Australian decedents with and without a cancer history

Version: 0 Date: 14 Jun 2016

Reviewer: Clare Gardiner

Reviewer's report:

This is a well written and useful piece of research. The international evidence base on economic research in palliative care is relatively weak so it is good to see research emerging in this area. The research is original and the methods are appropriate. There are some areas where more clarification is required to fully understand the methodology, and the discussion could be strengthened by greater reference to the international evidence base, but other than that I only have minor comments on this paper.

Essential revisions:

Methods: More details is needed on how costs were estimated. The authors only state 'we allocated unit costs to each item of resource use' but more information is needed on the source of the unit costs. Also please can you clarify if unit costs were available for all items of resource use within the dataset, and if not clarify how these costs were estimated.

Results: Whilst the findings are useful in highlighting differences in hospital use and costs at the end of life, there are no data on resource use or costs of community based care. I appreciate that this may be outside of the scope of this paper but given how much impact community services can have on likelihood of admission to hospital, it is important to acknowledge that community service data may have presented some additional insights.

Results: Data were collected on use of hospice and referral to palliative care services, but there are no cost data presented for these services. Can the authors explain this, as this would have been a useful addition to the dataset?

Discussion: It would be useful to discuss some of the international literature on costs of end of life in cancer and comment on whether your findings concur with this international literature.
Discussion: The authors make a very good point that differences in service provision and costs between older and younger decedents do not necessarily imply any differences in the quality or appropriateness of care. This is a complex issue and the authors might want to discuss some of the literature on inequity in end of life care for older people, particularly the work of Jenny Burt (e.g. Burt J, Raine S. The effect of age on referral to and use of specialist palliative care services in adult cancer patients: a systematic review. Age Ageing 2006; 35: 469-76 and Burt J et al. Equity of use of specialist palliative care by age: cross sectional study of lung cancer patients. Palliat Med 2010; 24: 641-50.).

This paper on barriers for older people accessing end of life care services might also be useful (Gardiner et al (2011) Barriers to the provision of palliative care for older people in acute hospitals. Age & Ageing40: 233-238)

Minor points:

Line 76 - I think this should be ‘age at death’?

Line 91 - Expand OECD

Line 96 - Is decedent the right word here? Maybe just needs rephrasing to clarify you are referring to people at the end of their lives rather than decedents or deceased people.

Line 249 - can you clarify if you are referring to all patients here or just the cancer decedents? The same applies at line 262.

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?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
I recommend additional statistical review

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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