Reviewer’s report

Title: Health service utilisation during the last year of life: a prospective, longitudinal study of the pathways of patients with chronic kidney disease stages 3-5.

Version: 0 Date: 29 Jan 2018

Reviewer: Sandra Bradley

Reviewer’s report:

This is a very good and important piece of work. Overall, it addresses an important aspect of end stage CKD and health service use but doesn't satisfy the proposition that palliative care services could impact on this. Explanations follow.

The abstract is well written but could include a sentence on what constitutes "appropriate palliative care services" for this cohort.

Background section:

Good explanation of why CKD has been chosen to investigate, how it relates to cost and hospitalisations in Australia and overseas.

Good clarification of PCS use in malignant and non-malignant disease populations.

Excellent information on how ESKD conservative treatment does not mean immediate death and could benefit from PCS.

Page 6:

Line 5 - one sentence summary of previous published paper [29] would be helpful to establish the need for PCS (critical components that address what was found in [29]).

Line 14 - nephrologist s/b plural

Page 7:

Line 7 - exclusion of those 2 hours or greater from recruitment site should be listed as a limitation to the study under Discussion.

Line 15 - remove comma after "collected".

Line 15 - Table should be plural.

Table 1: - second line s/b "Medical" not medial
Line 9 - define critical events as EDP and IPA to be consistent in terminology - this was done separately much later on but should be done at this point instead.

Line 6 - write EPA instead of spelling out to be consistent.

Line 22 - replace "accidentally" with "non-CKD related event".

Lines 23-24 - explain whether "conservative care" includes PCS. How many patients were already on PCS? Info on this is included in much later table but reference should be made at this point.

Table 3: comment in Discussion on why conservative patients were much older than the dialysis cohort. What effect might this have had on the choice of PCS and EDP and IPA?

Page 10:

Delete critical events terminology section and include earlier on Page 8, Line 9.

Line 8 - perhaps an explanation of what a "care pathway" means? You allude to this later as a "treatment care pathway" - define at this point whether it refers to hospital service designation or some other definable pathway created by patient/doctor and representatives? Was it an advance care plan?

Table 4: Does LOS in ED correlate to triage code in the conservative group? If so, comment on.

Page 13:

Line 7 - define treatment care pathway earlier.

Line 10 - why was KSCp established during the study period instead of just using PCS? What is the difference between the two?

Line 13 - Identify which patients in which group previously received PCS - this info is in Table 8 but I would suggest putting the previous use of PCS as a separate line in Table 3.

Keep Table 8 with reference to which services were used during the study period only.

Page 15:

Line 23 - patients s/b singular

Line 25 - comma after "nevertheless"

Page 16:
Line 1 - remove Although, remove comma and substitute "which showed"

Line 2 - no comma after lower

Line 4 - CDK s/b CKD

Line 4 "clearly our study, etc." - not necessary, remove this line.

Line 12 - lower case p for palliative care

Lines 15 - 16 - it's a bit of a stretch to say that based on your results people still think of palliative care as hospice. Maybe they just don't understand what services palliative care offer at different points of the patient illness journey that would benefit this patient cohort?

This is the essential flaw in this paper in that you don't actually articulate the specific elements of palliative care that could assist a person in the last 12 months of CKD. You know there is respiratory distress and pain. How does earlier access to PCS assist with this? Will nurses come to the home and administer oxygen? Will nurses or doctors come to the home and educate the person on how to do deep breathing exercises rather than panic? Be specific.

Lines 18 - 20 - again, a bit of a stretch. Many so-called 24 hour services only offer advice and then referral to "go to hospital" or "see your doctor". They don't initiate the action on behalf of the caller, nor are there adequate healthcare providers to go running for every call that comes in.

Page 17:

Line 1 - how would a pre-planned pathway to what community support services prevent respiratory distress presentations to EDP? Explain and be specific.

Line 11 - for instance s/b for example

Page 18:

Line 2 - "There are limitations" s/b "Nevertheless, there are also limitations to our study".

Line 4 - Separate sentences with dot point after "services.

Line 9 - 7 deaths out of 19 is not "relatively few" as it equals 39%. Might be better to say "less died than would have been anticipated with a 12-month prognosis". Any explanation for why less died than would be expected?

Line 20 - add CKD before patients

Discussion Section:
This section needs improvement. You have not identified how PCS could improve the quality of care and alleviate EDP and IPA for this cohort - explain how your findings will do this with an example.

Improvements for Practice section:

You indicated earlier in your paper that the critical incidents were not avoidable according to your expert nephrologists so how would practice be improved with your findings if the EDP at least was not avoidable? Unclear. Relate back to findings.

Otherwise, well written and easily understood methodology and results.

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.

No

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