PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Diagnosing Potentially Preventable Hospitalisations (DaPPHne): Protocol for a mixed-methods data-linkage study
AUTHORS	Passey, Megan; Longman, Jo; Johnston, Jennifer; Jorm, Louisa; Ewald, Dan; Morgan, Geoffrey; Rolfe, Margaret; Chalker, Bronwyn

VERSION 1 - REVIEW

REVIEWER	Martin Roland University of Cambridge, UK
REVIEW RETURNED	10-Sep-2015

GENERAL COMMENTS	This is an important study which definitely needs to be done (indeed I tried unsuccessfully to get a very similar study getting multiple perspectives on 1000 potentially avoidable admissions funded in the UK a couple of years ago). As such, I think that having the protocol in the public domain will be useful and will alert the research community to the ongoing piece of work. The researchers are to be congratulated for getting the study off the ground. I think the detail provided in the protocol is appropriate and I would support publication. One minor point. The gold standard panel looks good, but the protocol should state how many cases they plan to review. I think the panel will make their judgements independently and only meet when they need to discuss discrepancies. This might be clarified and whether, for example, any discrepancy between the three assessors will trigger a face to face meeting of the panel. If I may, I'll make a couple of comments on the protocol, though I appreciate it is probably too late to make changes. The number of hospitals (3) is a bit small. Ideally the number could be increased but if not it's very important that they are in geographically distinct areas. Otherwise, the factors affecting admissions could be very local to one particular health community. Second I think it's a real shame that they have excluded patients from residential homes who may potentially make up a high proportion of 'avoidable admissions'. Personally, I might have crossed the hurdle of including patients not competent to give consent, but assuming it's much too late to do that, I would urge the researchers to go back and get ethics approval at least for including residents from homes who are competent to give consent. Third, I think some data might be collected on the process of completing the Preventability Assessment Tool. Although this is

	presented to admitting clinicians by the research nurse and only takes five minutes to complete, this may be quite a challenge in a busy emergency room. Other researchers would find it useful to know in due course just how easy the instrument is to use.

REVIEWER	Dr Richard Fleet Université Laval, Québec City, Canada
REVIEW RETURNED	27-Sep-2015

GENERAL COMMENTS	This is a well a writing study protocol that pertain to the highly important issue of potentially preventable hospitalizations. The review of the literature is thorough and the studied is justified in an Australian setting. The mixt methods design and case selection well described. Sample size justification is clearly explained and recruitment realistic based on the numbers of admissions provided. Analysis are clearly described. This is a protocol for a major study with potential national and international impact on preventable admissions. This contribution is welcome in the context of increased pressures on the health care system and limited funding capacity. The authors should add a section on : expected results and potential impact of their findings.

REVIEWER	David Banham South Australian Health and Medical Research Institute (SAHMRI), Australia
REVIEW RETURNED	07-Oct-2015

GENERAL COMMENTS	The research team is to be commended for undertaking this important work. They appropriately articulate the need for validating a commonly used performance metric. The method described is comprehensive and would largely enable replication. The findings will be very relevant to informing and monitoring a range of out of hospital, and community care strategies. I wish them well in their studies and look forward to applying their findings. Several revisions required before publication include: Page 3, Line 10: consider revising punctuation e.g. “of, or access to,” Page 5, Line 13: Are patients without a GP to be excluded? If so, what does this bias mean for the study and how will it be managed? Page 5, Lines 18 & 19: Transfer definition of PAT to first occasion of use. Page 5, Line 30: How will Sub-study 3’s sample of consenting patients be drawn? Page 5, Lines 45 to Page 6, Line 4: Various population sub-groups are more likely to be repeatedly admitted for PPH conditions. How will repeat admissions for a given individual during the recruitment/capture phase be treated? Page 6, Line 32: Can participant response load be reduced without compromising the study objectives? For example, might the SF-36 v2 by an AQoL measure using fewer items while providing health profile and utility measure? Page 7, Lines 16-27: Has the research team considered the merits

	of interviewing practice nurses involved in the management of chronic conditions in primary care? Page 7, Lines 46-47: Please identify define what is meant by preponderance and its likely consequence for the sample in this sub-study. Page 8, Line 2: Purposive, or judgemental, sampling might provide valuable insights but are less likely to provide generalizable findings. How will the limitations be managed and /or is there a better alternative sampling approach available? Page 11, Lines 24-25: The protocols go to considerable lengths to gather and analyse information. However, the described dissemination of the knowledge created sounds trite in comparison. Given the clear commitment and interest of funding organisations to this work program, might there be comment on translating the science into policy development by seconding policy officers into the research and analysis, or similar?

VERSION 1 – AUTHOR RESPONSE

Reviewer 1: Martin Roland

One minor point. The gold standard panel looks good, but the protocol should state how many cases they plan to review. I think the panel will make their judgements independently and only meet when they need to discuss discrepancies. This might be clarified and whether, for example, any discrepancy between the three assessors will trigger a face to face meeting of the panel.

Response: the protocol already states that 150 patients will be included in the validation, in two places – the initial description of the sub-studies (page 5 and the section on statistical power (page 10). However, we have clarified this further in the initial description of the sub-studies (page 5). We have also clarified that a discrepancy in the judgement between the assessors will trigger a panel meeting (page 9 'Sub-study 2 – Validation of the Preventability Assessment Tool) .

If I may, I'll make a couple of comments on the protocol, though I appreciate it is probably too late to make changes. The number of hospitals (3) is a bit small. Ideally the number could be increased but if not it's very important that they are in geographically distinct areas. Otherwise, the factors affecting admissions could be very local to one particular health community.

Response: The hospitals are in geographically different regions, with two rural hospitals and one metropolitan hospital, with very different service and population profiles. Unfortunately we do not have resources to undertake the study in more sites.

Second I think it's a real shame that they have excluded patients from residential homes who may potentially make up a high proportion of 'avoidable admissions'. Personally, I might have crossed the hurdle of including patients not competent to give consent, but assuming it's much too late to do that, I would urge the researchers to go back and get ethics approval at least for including residents from homes who are competent to give consent.

Response: Patients from residential homes are deliberately excluded as the context of their care is very different to that of people living in the community (who rely much more on self-care and community based services) and thus the policy response to any identified factors contributing to admissions from residential facilities will be very different. We are exploring options for another study assessing admissions from residential facilities.

Third, I think some data might be collected on the process of completing the Preventability

Assessment Tool. Although this is presented to admitting clinicians by the research nurse and only takes five minutes to complete, this may be quite a challenge in a busy emergency room. Other researchers would find it useful to know in due course just how easy the instrument is to use.

Response: We will give consideration to this suggestion, through discussions with the research nurses, but are not currently including it in the protocol.

Reviewer 2: Richard Fleet

The authors should add a section on: expected results and potential impact of their findings.

Response: We have expanded the section on ethics and dissemination to address this.

Reviewer 3: David Banham

Several revisions required before publication include:
Page 3, Line 10: consider revising punctuation e.g. “of, or access to,”

Response: We have revised this

Page 5, Line 13: Are patients without a GP to be excluded? If so, what does this bias mean for the study and how will it be managed?

Response: No, patients without a GP are not excluded. We have clarified this by adding (if available) to this line.

Page 5, Lines 18 & 19: Transfer definition of PAT to first occasion of use.

Response: We were unclear what the reviewer meant by this comment

Page 5, Line 30: How will Sub-study 3’s sample of consenting patients be drawn?

Response: This section is only a very brief outline of the sub-studies. We have now included more detail regarding the sampling for sub-study 3, in the section describing the data collection for this study (page 7)

Page 5, Lines 45 to Page 6, Line 4: Various population sub-groups are more likely to be repeatedly admitted for PPH conditions. How will repeat admissions for a given individual during the recruitment/capture phase be treated?

Response: repeat admissions are included in the study. This has been clarified in the section on recruitment (bottom of page 5 to the top of page 6). This is already addressed in the analysis section.

Page 6, Line 32: Can participant response load be reduced without compromising the study objectives? For example, might the SF-36 v2 by an AQoL measure using fewer items while providing health profile and utility measure?

Response: the study has commenced and we do not wish to change the data collection instruments at this point.

Page 7, Lines 16-27: Has the research team considered the merits of interviewing practice nurses

involved in the management of chronic conditions in primary care?

Response: yes, this was considered but rejected due to the variability in structure of practices with only some practices having practice nurses and practice nurses having quite variable roles between practices.

Page 7, Lines 46-47: Please identify define what is meant by preponderance and its likely consequence for the sample in this sub-study.

Response: We have changed this to a 'majority' and have explained the reason for doing this.

Page 8, Line 2: Purposive, or judgemental, sampling might provide valuable insights but are less likely to provide generalizable findings. How will the limitations be managed and /or is there a better alternative sampling approach available?

Response: in this sub-study, our aim was not to provide a statistically representative sample and therefore produce 'generalizable' findings, but rather to maximise variability and explore issues in more depth. This variability means that our findings may resonate with similar groups, but may well not be meaningful to groups in different settings. In writing up our results we aim to describe the sample well to allow the reader to make this assessment.

Page 11, Lines 24-25: The protocols go to considerable lengths to gather and analyse information. However, the described dissemination of the knowledge created sounds trite in comparison. Given the clear commitment and interest of funding organisations to this work program, might there be comment on translating the science into policy development by seconding policy officers into the research and analysis, or similar?

Response: Unfortunately it is not possible to manage secondment of policy officers into the research within the available resources. However, we are working very closely with policy organisations and health services in undertaking this study and we have expanded on this in the section on dissemination (page 11).

VERSION 2 – REVIEW

REVIEWER	Martin Roland University of Cambridge, UK
REVIEW RETURNED	17-Oct-2015

GENERAL COMMENTS	The reviewer completed the checklist but made no further comments.

REVIEWER	David Banham University of Adelaide, Australia
REVIEW RETURNED	27-Oct-2015

GENERAL COMMENTS	A minor issue but Page 5, Line 18 please amend to read "2. Validation of a Preventability Tool (PAT)" then amend Line 19 and Page 6, Line 46 accordingly.