

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	A qualitative study exploring the factors influencing admission to hospital from the Emergency Department
AUTHORS	Pope, Ian; Burn, Helen; Ismail, Sharif; Harris, Tim; McCoy, David

VERSION 1 - REVIEW

REVIEWER	Adrian Boyle Cambridge University Hospitals Foundation Trust
REVIEW RETURNED	04-Mar-2016

GENERAL COMMENTS	<p>Thank you for asking me to review this interesting and well written paper. I have a number of suggestions that would improve the utility of the manuscript.</p> <ol style="list-style-type: none">1. This is qualitative research, this can only really ever improve understanding of context and provide targets for hypothesis testing. The authors cannot state that the factors are amenable to policy interventions from their results. It would be more appropriate to state that they have identified an number of variables that should be evaluated by quantitative research. (Mandatory Revision)2. The discussion on the four hour target increasing admissions (both in the abstract and discussion) suffers from the same conceptual flaw as in point 1. The literature on this is contradictory, but there is useful review article by me and Sue Mason in the British Journal of Hospital Medicine that summarises the quantitative aspects of the four hour target and admissions. (Mandatory Revision)3. I'm suprised that there is little mention in the results about the role of the GP and access to primary care, I could conceive of a patient being sent to the ED by a GP primed to expect admission. Likewise, if a ED doctor was confident that a patient could see a GP easily, this might lower the threshold. (Optional revision)4. The conversion rates could more efficiently be put into Table 1. (Optional revision)5. The authors need to consider whether they have 'gone native' as interviewers. I appreciate that the inside knowledge may make acquiring data easier, but they may bring a whole set of unconscious biases. (Doctors interviewing other Doctors?) (Mandatory Revision)6. I'm also suprised that the role of senior nursing staff didn't come up, this could be discussed (optional revision)
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REVIEWER	Arjun Venkatesh Yale University School of Medicine
REVIEW RETURNED	07-Mar-2016

GENERAL COMMENTS	General Comments:
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	<p>Thank you for this opportunity to review this qualitative study of reasons for hospital admission among 3 NHS EDs. This work addresses an important area for inquiry, has several methodological strengths and has the opportunity to advance the policy discussion and future research in this area. Unfortunately, there are several key methodological details not described sufficiently to thoroughly evaluate the rigor of the interviews, coding and summation of results, and interpretation of findings. Given the completed COREQ checklist in the supplement I think that additional detail in the methods and better discussion of the studies limitations can be added to the manuscript. I also believe the conclusions and discussions overstate the policy important of this work, which the design and methodological limitations do not support—the authors should instead frame this work as an exploratory study to set future research aims and ignite policy discussions—not as a study instructive of specific policy solutions.</p> <p>Comments by Section:</p> <p>Strengths and limitations:</p> <ol style="list-style-type: none">1. Would be good to qualify the term “management” as it is unclear if this is about operational and administrative approaches or clinical management2. Mention of the quantitative study in the strengths and limitations is not necessary given that this other study is not discussed at all in this manuscript. Should just be noted in methods. <p>Introduction:</p> <ol style="list-style-type: none">1. Line 9: would use term “or” instead of “and” after avoidable2. Line 19: was the prior work really designed to identify “errors” in triage, diagnosis and communication? Few taxonomies exists to classify errors in this gray areas-consider softening to variability.3. Why is the ED length of stay discussed as a neglected area of study when this study is neither designed to or targeted at this issue?4. The conceptual framework for the level of this analysis needs to be clarified in the introduction—is the purpose of this work to examine the clinical and managerial differences between the 3 EDs studied or is to examine differences between physicians? Or is to be truly “grounded” and generate a list of potential etiologies regardless of provider or setting? I assume the latter and if so, then the degree to which systems and providers are different should be described at the beginning of the methods so that readers can better understand if the interview methodology would likely result in thematic saturation for the topic of focus. <p>Methods:</p> <ol style="list-style-type: none">1. Line 50: Would recommend the term “underserved” rather than deprived given the potential international readership2. Page 5: summary of quantitative results is not helpful for this investigation, nor does it appear valid or meaningful as presented. There are many reasons that different EDs may have different admission rates beyond the patient factors listed. If this work is published then include in the introduction as basis for this work—otherwise I think it would be better removed as variation in admission practices is a well known phenomena ripe for qualitative research.3. Line 11-18: this conceptual framework is described to focus on systems-level issues. This can be suitable to focus the research and analysis, but then it needs to be clarified that while the final decision maker is the doctor—that variability in this decision was not the focus of this work as it lies outside the conceptual model.4. Page 5, line 23: please clarify that consultants were emergency
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	<p>physicians if not ward attendings</p> <p>5. Page 5, line 25: for a grounded theory study a “response rate” is neither necessary nor should it be calculated. The only discussion about response numbers should be with respect to thematic saturation. The authors need to dedicate a portion of the discussion to justifying why an equal spread of informants was not necessary. If it was necessary, then these findings are not valid—can the authors note why limited interviews at site 3 are sufficient to comment on the findings presented if the purpose is to present site-specific findings? Otherwise, if the study is merely to collate the responses of three EDs into a prototypical ED then this site issue and variability is not relevant.</p> <p>6. Methods should better describe key elements of the methodology: why was a semi-structured interview design chosen instead of focus groups? Or instead of a survey? Also how was the interview guide constructed and was it pilot tested?</p> <p>7. Methods need to better describe coding process and analysis. Were all interviews coded by one author with selective coding by the other? What other methods were used to ensure reliable coding? Were only themes or themes and quotes reviewed by the larger project team? Was software such as Atlas or In Vivo used?</p> <p>8. Themes and determinants (which I assume are sub-reasons for admission) need to be defined in the methods. Also. the authors should described if they built built a preliminary coding tree prior to review of the interviews (is that figure 1?)and how this tree was updated and modified as interviews were reviewed.</p> <p>9. Was the focus of this study and the interviews “non-clinical” reasons? If so then the methods in which this concept was defined, described to interviews and considered when conducting interviews or interpreting results? What happened when “clinical” or near clinical reasons were raised?</p> <p>10. In general the methods could be better structured and meet the questions above through the use of a structured checklist or reporting format for qualitative research such as COREQ not only as s supplement but also in the methods section. I have raised as many checklist issues as I initially captured.</p> <p>11. Why not include patients as interview subjects? While I can understand that requires some changes to methodology—the authors need to better note the limitation of not including patients as subjects?</p> <p>Findings:</p> <p>1. Were all respondents working in a capacity to assess the 2000 policy or were they trainees, in another profession, or worse yet not yet trained in clinical care at the time? Is it possible that the previous policy is simply “blamed” for time pressure by older physicians and other staff?</p> <p>2. Is the 2nd quote really noting that patients are admitted with a blood test that may result in 20 minutes or was this said in hyperbole? I imagine the latter and that can be parenthetically noted</p> <p>3. Were any examples given of what clinical practice was previously in scope of emergency physicians that was lost by the 4 hour target. I can’t imaging much time sensitive care occurs between hours 4 and 8 or 12 of an acute care stay except for what is done in an observation unit?</p> <p>4. I think avoiding the acronyms and instead using the actual term for the person would be easier to read</p> <p>5. In time of day section it would be easier to differentiate between time of day within the ED (where availability of CT seems to be important) and time of day for outside ED issues such as social support. Transport was also discussed in an earlier results section—</p>
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	<p>so please comment on why it was coded in both sections</p> <p>6. Was patient expectation the only patient-driven issue discussed?</p> <p>7. Was the author conducting interviews known by colleagues for experience of interest in policy or the four hour rule as that could bias responses</p> <p>Discussions:</p> <p>1. The discussion opens with a very improvement focused frame that I did not gather in the methods. Were interviews truly focused on identifying items outside the control of the hospital or the ED? Many responses are in hospital or ED control so this is confusing. Also, the discussion opens as if providers were asked about targets suitable for intervention, but again not all identified findings match this expectation. The opening to discussion should not overstate the importance or findings of this work as definitive as is it all exploratory.</p> <p>2. If the four hour target is featured as the most prominent issue then we need to know more about each respondent's frame of reference and incentives with respect to the target as well as their experience with and without it. While my comments should not be viewed as disagreeing with or invalidating the responses, I do think more context is necessary to understand these responses. Is it possible that the national data resulted in the quotes described? The unintended consequence of higher admission rates has been published on and well publicized in the NHS and internationally—perhaps we are simply seeing that in the interviews.</p> <p>3. The fourth paragraph recommending policy changes or suggestions is a stretch for this work. If the authors seek to stay true to the grounded theory approach then this work may suggest conducting a test or an experiment of relaxed targets in select EDs, but this does not warrant policy change at this point.</p> <p>4. Page 12, line 17—this paragraph likely speaks to much of what the 4 hour rule discussion is about—clinicians identified an underlying barrier as lack of access to diagnostic services and then tied it to the 4 hour rule given its popularity.</p> <p>5. How do we know thematic saturation was achieved and that these findings are strong and/or robust? Without a better defense of the methods and this approach in the discussion it is difficult to support the research and policy recommendations throughout the discussion. I think the authors should limit and remove many of the policy recommendations and instead discuss the meaning of the quotes and what that suggest for future inquiry/research and what that suggests for evaluation of existing policy programs. This study does not support any specific solutions as it was not designed too—therefore specific solutions should not be recommended.</p> <p>6. More of this work needs to be interpreted alongside similar work by Calder (citation 7)</p> <p>Conclusions:</p> <p>1. Need to temper conclusions somewhat given this is a limited interviews of this study.</p> <p>2. Final sentence is outside the scope of this work and can be removed</p> <p>Figure 1: is this model specific to non-clinical reasons, if so that should be clear. Also was this the hypothesized model before the study?</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

1. This is qualitative research, this can only really ever improve understanding of context and provide targets for hypothesis testing. The authors cannot state that the factors are amenable to policy interventions from their results. It would be more appropriate to state that they have identified a number of variables that should be evaluated by quantitative research. (Mandatory Revision)

We have amended the language to reflect the fact that the factors we identify and discuss are potentially amenable to policy and managerial intervention; and that, as you correctly point out, for many of the factors identified, further research would be an important follow-up.

2. The discussion on the four hour target increasing admissions (both in the abstract and discussion) suffers from the same conceptual flaw as in point 1. The literature on this is contradictory, but there is useful review article by me and Sue Mason in the British Journal of Hospital Medicine that summarises the quantitative aspects of the four hour target and admissions. (Mandatory Revision)

Thankyou for pointing this out. We were struck by the fact that many informants were strongly of the opinion that admissions could be avoided if a little more flexibility was built into the four hour target. We have reviewed your helpful paper and referenced it, and have amended our discussion about the four hour target accordingly.

3. I'm surprised that there is little mention in the results about the role of the GP and access to primary care, I could conceive of a patient being sent to the ED by a GP primed to expect admission. Likewise, if a ED doctor was confident that a patient could see a GP easily, this might lower the threshold. (Optional revision)

Yes, this is a surprise. Some informants spoke about 'patient preferences' but did not mention GP preferences or expectations. We have now included this point in the discussion.

4. The conversion rates could more efficiently be put into Table 1. (Optional revision)

Thanks, but we've actually decided to keep the conversion rates in the text rather than to include in Table 1.

5. The authors need to consider whether they have 'gone native' as interviewers. I appreciate that the inside knowledge may make acquiring data easier, but they may bring a whole set of unconscious biases. (Doctors interviewing other Doctors?) (Mandatory Revision)

Thankyou. We agree that this is a potential source of bias which should be mentioned. To avoid / minimise researcher bias, we have used a reasonably structured approach to data collection and have also been consciously reflexive. We have made amendments to the text accordingly.

6. I'm also surprised that the role of senior nursing staff didn't come up, this could be discussed (optional revision)

This did come up in the interviews, but more in reference to the 'organisational culture' of EDs of which senior nursing staff are an important influence.

Additional note

Based partly on comments and observations made by a second reviewer, we have also made

changes in the findings section to our construction of 8 themes and 19 determinants which we drew from our qualitative data. Essentially we agreed with the reviewer's comments that the exploratory nature of our data needed to be presented in a less definitive manner. We have therefore removed the list of 19 determinants and collapsed our findings into a set of six factors.

Reviewer: 2

Arjun Venkatesh
Yale University School of Medicine

Thank you for this opportunity to review this qualitative study of reasons for hospital admission among 3 NHS EDs. This work addresses an important area for inquiry, has several methodological strengths and has the opportunity to advance the policy discussion and future research in this area.

Unfortunately, there are several key methodological details not described sufficiently to thoroughly evaluate the rigor of the interviews, coding and summation of results, and interpretation of findings. Given the completed COREQ checklist in the supplement I think that additional detail in the methods and better discussion of the studies limitations can be added to the manuscript. I also believe the conclusions and discussions overstate the policy important of this work, which the design and methodological limitations do not support—the authors should instead frame this work as an exploratory study to set future research aims and ignite policy discussions—not as a study instructive of specific policy solutions.

Thankyou very much for your extremely helpful comments. We agree that there is a need to provide more methodological details, and to highlight the methodological limitations more clearly. We have made a number of amendments which we hope will address this general point. Further detailed responses to specific comments are shown below.

We also agree that the conclusions drawn from our study should be couched in less definitive language; and that they point to a number of factors that require further study or evaluation. Again, we have made a number of amendments to the manuscript accordingly.

A final general point to make is that your comments have been helpful in getting us to reconsider the way in which we have organised our findings and conclusions. As you rightly point out, the focus of our study was on those factors considered to be important by our informants, but which were amenable to change from within the hospital. We developed a framework (Figure 1) to help us organise our semi-structured interview of informants, and then produced a list of eight themes and 19 'determinants' that emerged from the qualitative data collected from our informants.

However, in reflecting upon your comments we recognised that this schema was not clear or consistent. The distinction between themes and determinants was not clear; and not all of the 19 listed determinants were in fact determinants.

We have therefore made changes to the way we've organised the findings – primarily in the direction of simplifying the findings. Specifically we have removed the distinction between themes and determinants, and reduced the findings to a single set of six 'factors'. These six factors correspond to the previous eight themes, with a couple of themes having been combined.

We think that this simplification of the findings is consistent with the exploratory nature of the study, and provides a more appropriate foundation for setting forth future research directions and igniting policy discussions.

Comments by Section:

Strengths and limitations:

1. Would be good to qualify the term “management” as it is unclear if this is about operational and administrative approaches or clinical management.

Thankyou. We have made a number of amendments aimed at highlighting the distinction between management of the ED and ‘clinical management.

2. Mention of the quantitative study in the strengths and limitations is not necessary given that this other study is not discussed at all in this manuscript. Should just be noted in methods.

Agree. Done.

Introduction:

1. Line 9: would use term “or” instead of “and” after avoidable

Agree. Done.

2. Line 19: was the prior work really designed to identify “errors” in triage, diagnosis and communication? Few taxonomies exists to classify errors in this gray areas-consider softening to variability.

Thankyou. This has been corrected.

3. Why is the ED length of stay discussed as a neglected area of study when this study is neither designed to or targeted at this issue?

Good point. This has been amended.

4. The conceptual framework for the level of this analysis needs to be clarified in the introduction—is the purpose of this work to examine the clinical and managerial differences between the 3 EDs studied or is to examine differences between physicians? Or is to be truly “grounded” and generate a list of potential etiologies regardless of provider or setting? I assume the latter and if so, then the degree to which systems and providers are different should be described at the beginning of the methods so that readers can better understand if the interview methodology would likely result in thematic saturation for the topic of focus.

We have clarified the relationship between the framework shown in Figure 1, and our analysis of the data. The purpose of the study was primarily to explore to see if there were differences across the three sites. But in doing so, informants naturally raised various issues that were common across all three sites. Our findings therefore cover both. We believe that we have achieved broad thematic saturation of the topic, and are confident in having identified the key factors involved in influencing the incidence or frequency of avoidable / unnecessary admissions. What we feel is important to highlight is the value of qualitative research of this sort in providing the justification for raising and then addressing a number of issues that may result in better quality care or improved efficiency.

Methods:

1. Line 50: Would recommend the term “underserved” rather than deprived given the potential international readership

Changed as suggested.

2. Page 5: summary of quantitative results is not helpful for this investigation, nor does it appear valid or meaningful as presented. There are many reasons that different EDs may have different admission

rates beyond the patient factors listed. If this work is published then include in the introduction as basis for this work—otherwise I think it would be better removed as variation in admission practices is a well known phenomena ripe for qualitative research.

We have chosen to leave these results in the text, as we feel it provides some useful contextual background to the study. However, we have amended the text in such a way as to avoid making over-drawn conclusions from the figures.

3. Line 11-18: this conceptual framework is described to focus on systems-level issues. This can be suitable to focus the research and analysis, but then it needs to be clarified that while the final decision maker is the doctor—that variability in this decision was not the focus of this work as it lies outside the conceptual model.

It's correct that we did not examine the variability of practice of individual doctors, and did not seek to assess this as a phenomenon. Inclusion of the doctor in the conceptual framework is primarily for heuristic purposes. We have made this more explicit in the text.

4. Page 5, line 23: please clarify that consultants were emergency physicians if not ward attendings
Thankyou. Done

5. Page 5, line 25: for a grounded theory study a “response rate” is neither necessary nor should it be calculated. The only discussion about response numbers should be with respect to thematic saturation. The authors need to dedicate a portion of the discussion to justifying why an equal spread of informants was not necessary. If it was necessary, then these findings are not valid—can the authors note why limited interviews at site 3 are sufficient to comment on the findings presented if the purpose is to present site-specific findings? Otherwise, if the study is merely to collate the responses of three EDs into a prototypical ED then this site issue and variability is not relevant.

This points to a limitation of the study, which have now been described more explicitly in the manuscript. We cannot make any definitive statements about site specific differences, but we have recommended further research on the one site with a particularly high conversion rate.

6. Methods should better describe key elements of the methodology: why was a semi-structured interview design chosen instead of focus groups? Or instead of a survey? Also how was the interview guide constructed and was it pilot tested?

7. Methods need to better describe coding process and analysis. Were all interviews coded by one author with selective coding by the other? What other methods were used to ensure reliable coding? Were only themes or themes and quotes reviewed by the larger project team? Was software such as Atlas or In Vivo used?

Thankyou for both sets of comments above. We have made a number of amendments accordingly.

8. Themes and determinants (which I assume are sub-reasons for admission) need to be defined in the methods. Also, the authors should described if they built a preliminary coding tree prior to review of the interviews (is that figure 1?) and how this tree was updated and modified as interviews were reviewed.

Thankyou. As discussed above, we have clarified the relationship between the framework in figure 1 and the findings.

9. Was the focus of this study and the interviews “non-clinical” reasons? If so then the methods in which this concept was defined, described to interviews and considered when conducting interviews or interpreting results? What happened when “clinical” or near clinical reasons were raised?

10. In general the methods could be better structured and meet the questions above through the use of a structured checklist or reporting format for qualitative research such as COREQ not only as a supplement but also in the methods section. I have raised as many checklist issues as I initially captured.

Thankyou for both sets of comments above. We have made a number of amendments accordingly;

and hope to have provided a clearer description of the methodology and limitations therein.

11. Why not include patients as interview subjects? While I can understand that requires some changes to methodology—the authors need to better note the limitation of not including patients as subjects?

We did not include patients as interview subjects primarily because we did not see them as key informants on how EDs are managed and operated.

Findings:

1. Were all respondents working in a capacity to assess the 2000 policy or were they trainees, in another profession, or worse yet not yet trained in clinical care at the time? Is it possible that the previous policy is simply “blamed” for time pressure by older physicians and other staff?

The answer to the first question is yes; and the findings of our study are consistent with other studies.

2. Is the 2nd quote really noting that patients are admitted with a blood test that may result in 20 minutes or was this said in hyperbole? I imagine the latter and that can be parenthetically noted. These quotes are not hyperbolic, and were inserted to illustrate the inflexibility of the four hour target.

3. Were any examples given of what clinical practice was previously in scope of emergency physicians that was lost by the 4 hour target. I can't imagine much time sensitive care occurs between hours 4 and 8 or 12 of an acute care stay except for what is done in an observation unit?

There was one clear example given in the interview – for example, removal of clots following a miscarriage. But the general point is that which is made in the manuscript which is that ED doctors focus on triage and referral, sometimes at the expense of care and treatment. This too has been documented in other studies.

4. I think avoiding the acronyms and instead using the actual term for the person would be easier to read

We have made this change, which we agree would be easier for non-UK readers.

5. In time of day section it would be easier to differentiate between time of day within the ED (where availability of CT seems to be important) and time of day for outside ED issues such as social support. Transport was also discussed in an earlier results section—so please comment on why it was coded in both sections.

We agree that there was some overlap in issues identified, and have subsequently removed time of day as a 'theme' because this is a factor that accentuates the other more fundamental factors. The key point about diagnostic services (within an ED) or services outside the ED is that they are time and day sensitive.

6. Was patient expectation the only patient-driven issue discussed?

Yes. There was no mention of other potentially 'patient-driven' issues raised (e.g. language, or ethnicity)

7. Was the author conducting interviews known by colleagues for experience of interest in policy or the four hour rule as that could bias responses

Yes. This is a point raised by the second reviewer and we have described this and discussed the potential for bias.

Discussions:

1. The discussion opens with a very improvement focused frame that I did not gather in the methods. Were interviews truly focused on identifying items outside the control of the hospital or the ED? Many responses are in hospital or ED control so this is confusing. Also, the discussion opens as if providers

were asked about targets suitable for intervention, but again not all identified findings match this expectation. The opening to discussion should not overstate the importance or findings of this work as definitive as is it all exploratory.

Our discussion is drawn from the responses of the informants, but with the aim of identifying potential actions for reducing unavoidable or unnecessary admissions. We mention the four hour target first because although it is not in the control of the ED or hospital, it came out as being the most pronounced issue when discussing factors that may lead to unavoidable or unnecessary admissions.

2. If the four hour target is featured as the most prominent issue then we need to know more about each respondent's frame of reference and incentives with respect to the target as well as their experience with and without it. While my comments should not be viewed as disagreeing with or invalidating the responses, I do think more context is necessary to understand these responses. Is it possible that the national data resulted in the quotes described? The unintended consequence of higher admission rates has been published on and well publicized in the NHS and internationally—perhaps we are simply seeing that in the interviews.

We are not sure if we fully understand the point being made here. While we have elicited a strong and common set of comments about the four hour target, it was not the purpose of this research to investigate why our respondents may have put forward these views. The fact is that they described it as an important influence of admission practices and a factor that contributes to unavoidable or unnecessary admissions. The views expressed by our informants are consistent with other findings, but what is stressed in this piece of research is the view that a significant number of admissions may be prevented if either more time or more services were made available to clinicians in EDs.

3. The fourth paragraph recommending policy changes or suggestions is a stretch for this work. If the authors seek to stay true to the grounded theory approach then this work may suggest conducting a test or an experiment of relaxed targets in select EDs, but this does not warrant policy change at this point.

We agree; and have amended the discussion accordingly.

4. Page 12, line 17—this paragraph likely speaks to much of what the 4 hour rule discussion is about—clinicians identified an underlying barrier as lack of access to diagnostic services and then tied it to the 4 hour rule given its popularity.

We think that it is more likely that the two factors (four hour target and lack of access to diagnostic services) are sometimes synergistic.

5. How do we know thematic saturation was achieved and that these findings are strong and/or robust? Without a better defense of the methods and this approach in the discussion it is difficult to support the research and policy recommendations throughout the discussion. I think the authors should limit and remove many of the policy recommendations and instead discuss the meaning of the quotes and what that suggest for future inquiry/research and what that suggests for evaluation of existing policy programs. This study does not support any specific solutions as it was not designed too—therefore specific solutions should not be recommended.

We agree. We have modified our discussion section accordingly.

6. More of this work needs to be interpreted alongside similar work by Calder (citation 7)

As above – the discussion has been modified considerably, based on your helpful comments.

Conclusions:

1. Need to temper conclusions somewhat given this is a limited interviews of this study.

2. Final sentence is outside the scope of this work and can be removed

We agree on the need to temper our conclusions. However, we have included more discussion about the likely importance of hospital-specific factors influencing the conversion rates of individual

hospitals. But in doing so, we have suggested that hospitals might want to undertake some in-house monitoring and evaluation to determine if improvements can be made to reduce the number of avoidable or unnecessary admissions.

Figure 1: is this model specific to non-clinical reasons, if so that should be clear. Also was this the hypothesized model before the study?

Thankyou. We hope to have now addressed this.

VERSION 2 – REVIEW

REVIEWER	Adrian Boyle Addenbrookes Hospital, Cambridge
REVIEW RETURNED	18-May-2016

GENERAL COMMENTS	<p>The authors have done a good job of the revisions, I have some minor concerns which the authors should be able to sort out easily.</p> <ol style="list-style-type: none">1. Page 5 line to 1-7 these are results and have strayed into the methods. These should be tabulated.2. Page 7 the framework diagram isn't visible3. Page 12 1 has a typo4. Page 11 l60. The authors can't state that the 4HT target has not been adequately studied without mentioning the key literature. They have only included one of the key papers that look at this. They should also include the Australian evidence on the NEAT https://www.mja.com.au/journal/2016/204/9/national-emergency-access-target-neat-and-4-hour-rule-time-review-target and the Annals paper by Ellen Webber that looked at the change in admissions following the 4HT.5. The referencing has gone a little awry
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VERSION 2 – AUTHOR RESPONSE

We thank the reviewer for his feedback and corrections.