Reviewer’s report

Title: Involving End-Users in the Design of an Audit and Feedback Intervention in the Emergency Department Setting - a Mixed Methods Study

Version: 0 Date: 26 Jan 2019

Reviewer: Bridget Kool

Reviewer's report:

Thank you for the opportunity to review this paper which aimed to develop design requirements for an ED performance dashboard and to understand the role of culture and social networks in the adoption and associated behaviour change. The paper is very well written and follows a logical flow. The methodological approach is overall sound and the conclusions drawn seem appropriate for the study findings. I have some issues in relation to the overall aim of the project and elements of the methods, however none of these are unsurmountable but I believe do require additional explanation/information. I hope the authors find my feedback useful. NB the manuscript came with two sets of line numbers I have elected to refer to the continual set.

GENERAL FEEDBACK

I would encourage you to reconsider the use of the term 'provider/s' throughout the manuscript. It would seem when you use this term you are predominately refereeing to ED Doctors/physicians. This journal has an international readership and therefore the use of more generic terms may be advantageous.

It should also be noted that in many countries it is not only Drs who can order laboratory tests, in many places advanced nurse practitioners can. However, for the purpose of this study the focus was doctors.

It would be useful to draw in some of the Quality Improvement literature in this section, to highlight that in healthcare we should aim to reduce harm, waste, and variation. In relation to diagnostic tests, the overall goal should not be to reduce the amount of diagnostic tests ordered but to reduce the amount of inappropriate tests ordered. Practice should be evidence-based and as such follow the recommended suit of diagnostic tests recommended by evidence based guidelines for the management of certain conditions, this would help to reduce waste and variation.

As it currently stands It seems that the goal of your dashboard is to reduce the volume of tests. The limitations of this as a goal need to be made more explicit.
BACKGROUND

As per previous comments regarding some suggested additional information to consider including

Line 71: should clarify that you are refereeing to LOS 'in the ED'

It might be useful to clarify that for the purposes of this paper the term 'diagnostic tests' refers to laboratory and imaging tests

Do you have any general data regarding the over ordering of diagnostic tests in the US and if there are particular conditions/settings where this is more likely to occur and for which tests. Or if there are biases present e.g. low rates of ordering for low socio-economic groups? Also is there any information for the information where the study took place?

Lines 102-3: the 'how' needs to be added to this sentence i.e. by reducing diagnostic test ordering.

METHODS

See earlier comments re use of descriptors for medical staff that are more global in nature

Line 113: can abbreviate 'Los Angeles County' at the end of this sentence to 'LAC'

Would the hospital where the study took place be considered a 'public' hospital in other settings e.g. UK, Australia, NZ, Canada. It might be useful to signal that for the non-US reader

Line 124: the changing of practice would appear to be in relation to the ordering of diagnostic tests - this context should be added.

Line 125: change 'sixty-minute' to 60 minute

Line 126: goals in relation to what all aspects of the unit of just diagnostic tests?

Line 130: were these leadership people also clinicians or were they unit management type people - useful to clarify

Line 200: did the list of 'ED provider-names' include medical staff and the leadership team?

Ethics: currently no mention of if ethics approval was obtained for the study, if so from where? Was informed consent to take part obtained from participants? If ethics approval was not obtained then this needs to be explained
RESULTS

This section was very well presented, and clearly presented.

Some very interesting findings in relation to workplace culture and the adoption in innovations

Useful to identify respondent quotes in a de-identified manner e.g. 01, 02. Otherwise it is difficult for the reader to know if it was the same respondent providing all the quotes.

% in tables should be avoided unless the n is close to 100. Suggest removing %'s from the tables and text. Instead refer to the proportions a fractions (e.g. more than a half) or by overall size (e.g. most (n = x/x)

There are a lot of tables. I wonder if table 3 could be simply described in the text.

DISCUSSION

Again, well-structured and clearly articulated. A good discussion of the strengths and limitations of this work and the implications

In the first paragraph, mention of the desire to reduce the number of diagnostic tests should be made explicit
There is currently insufficient mention of the shortfalls of dashboards

What are the processes in place to audit the appropriateness of diagnostic test ordering in the organisation? E.g. a "quick disposition decision" may have a negative outcome - patient unnecessarily admitted/discharged; key diagnostic information not obtained that results in delays in treatment.

ABSTRACT:

Revise in light of feedback given for specific sections above.

Methods: Suggest indicating where the study took place i.e. USA, public hospital ED

Line 42: when I first read this I envisaged you meant drs, nurses, allied health etc. It would be more accurate to refer to them as senior and trainee drs (or something similar)
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

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Please indicate the quality of language in the manuscript:

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