Author’s response to reviews

Title: Diagnostic error in the emergency department: learning from national patient safety incident report analysis

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Author’s response to reviews:

Dear Dr Tu,

Thank you for considering our research study and for providing us with feedback regarding the material.

The following actions described below have been taken in response to the comments feedback to the authors. We have also taken actions in response to comments from NHS Improvement. We hope that you will still consider this research study for publication in BMC Emergency Medicine.

We look forward to hearing from you.

Kind Regards,

Faris Hussain
Edits in response to Peer Reviewer 2 comments

1. Comment 1

Background: Line 4: please check the first section for style and grammar

Action: We have edited page 4; background; lines 3 -4 for style and grammar.

2. Comment 2

Study design and setting: Who does report incidences to the NRLS? Doctors, nurses? How is this done? Electronically and anonymously?

Action: We have edited page 5; methods; study design and setting; lines 9-11 and have clarified that reports are entered voluntarily, electronically and anonymously mainly by healthcare professionals including doctors or nurses, and that most reports are entered by acute trusts.

3. Comment 3

Data sampling: How was NRLS searched or filtered? By a computer program? How was this done? By whom were reports read to assess for eligibility criteria? Who decided if a report was eligible or not? How was this done?

Action: We have edited page 5; methods; data sampling; lines 1-3 and have mentioned that the reports are entered via an electronic/datix platform and have specified that the reports authors originally enter the reports as those concerning diagnostic error. We have also added the specific categories used for the search in relation to the emergency department.

4. Comment 4

Discussion: Please discuss potential bias.

Action: We have edited page 6; methods; data coding; lines 12-13 to describe the Cohen’s kappa score that was calculated, with 10% of reports doubled coded to assess inter-rater agreement.
Action: We have edited page 7; results; lines 3-4 to include the results of the double coding, including the Cohen’s kappa score of 0.868.

Action: We have edited page 10; discussion; strengths and limitations; lines 19-24 and have provided an insight into some possible detection bias. We have worded this as the following.

“There is a risk of detection bias in the selection and subsequent coding of reports, as this depends on the application of the Primary Care Patient Safety (PISA) taxonomy by report raters. We attempted to counteract this with 10% of the reports double-coded, showing a kappa score of 0.868. Scores higher than 0.700 have been accepted in similar research studies (34, 46) and our methods and training have mirrored these previous research studies.”

Edits in response to comments from NHS Improvement

Abstract

Action: We have edited page 2; abstract; results; line 2 to say that incidents “were reported to have” as opposed to resulted in.

Background

Action: We have edited page 4; background; line 14 to specify “part of the UK”.

Methods

Action: We have edited page 5; methods; study design and setting; line 6 to specify that reports of “high severity” are mandatory, corrected from those of outcomes relating to severe harm or death.

Action: We have edited page 5; methods; data sampling; lines 5 and 9-11 to clarify that all reports from the searched sample were read and that our inclusion criteria related to text in the report and the absence of a prevented patient safety incident.
Action: We have edited page 6; methods; data coding; line 3 to clarify that the coding framework used is not the NRLS’s own coding framework.

Results

Action: We have edited page 8; results; insufficient assessment; line 3 to correct for mistakes in the percentage calculations.

Action: We have edited page 8; results; severe harm and death reports; lines 1-2 for grammar.

Discussion

Action: We have edited page 10; discussion; strengths and limitations; lines 3-8 and lines 11-15 to consider the limitations of the NRLS report categories and incident reporting the NRLS.

Action: We have edited page 11; discussion; strengths and limitations; lines 25-29 to discuss the limitations of using the frequency of diagnoses in this study.

Action: We have edited page 11; discussion; comparison with the literature; lines 10 and 29 to expand the abbreviation of ECG when first used.

Figure 1

Action: We have edited the text to provide more detail regarding the search categories used.

Table 1

Action: We have edited the table to add a totals row at the bottom, a row concerning pneumonia and corrected a mistake with numbering at the number of reports concerning acute abdomen.
Table 2
Action: We have clarified the meaning of C2 within the text of the 2nd example report.

Word Count
Action: We have edited page 2 to reflect the change in the Abstract word count from 249 to 251.

Action: We have edited page 13 to reflect the change in the word count from 2,776 to 3,084.

List of abbreviations
Action: We have edited page 13 to add Development of the Patient Safety Incident Management System DPSIMS), Electrocardiogram (ECG) and Primary Care Patient Safety (PISA) to the list of abbreviations

Declarations
Action: We have edited page 15; availability of data and material to rectify that data is not available as we are unable to share the anonymous reports.

Address of corresponding author
Action: We have edited page 1; corresponding author; to change the corresponding author Dr. Alison Cooper who can be contacted at Coopera8@cardiff.ac.uk