PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Prevalence and severity of patient harm in a sample of UK hospitalised children detected by the Paediatric Trigger Tool.
AUTHORS	Chapman, Susan; Fitzsimons, John ; Davey, Nicola; Lachman, Peter

VERSION 1 - REVIEW

REVIEWER	samford wong National Spinal Injuries Centre, Stoke Mandeville Hospital, Aylesbury; Centre for Gastroenterology and Clinical Nutrition, University College London, London
REVIEW RETURNED	10-May-2014

GENERAL COMMENTS	Thank you for giving me the opportunity to review this paper. Providing safe care is fundamental goal for modern healthcare, and therefore, it is extremely important to know what predictive factor could affect the delivery of safe care. I have some concerns with this article. There are some typos exist in this manuscript. I am not quite clear how and why there is a need to develop the UK Paediatric Trigger Tool? The authors stated a Canadian one already exists, so why not used this in the UK? The authors claimed the Canadian was not published but later on, they quoted the findings using the Canadian tool (Ref: 25). If this is the case that the Canadian tool was not published, why the authors decide not to validate this but decide to invent a new one? Certainly this would not help in promoting to use a universal tool? Could the authors provide some additional justification for using the UKPTT? I understand the UK NHS Institute (page 9, line 9) website will soon deactivated, may be this tool could be update as supplementary information. Sample were recruited from a range of hospitals including children hospitals and district general hospitals. Would the authors consider this is a homogenous group? If not, what is the rationale of including these specialities? The fact there appears to be a mix of sick children may present different confounding variables The authors quite rightly highlighted the limitation of the study. Why were they decided not to do sample size calculation? In the current study, specific hypotheses are not given. Sample size appears to be determined by convenience and not justified was given. Finally, I think there is still a valid clinical need to validate the UKPTT before implementing in hospital setting. Best would be to audit its yield in clinical practice. If the tool is proven not valid, all the subsequent analysis is erroneous.

REVIEWER	Dr Yincent Tse Great North Children's Hospital, Newcastle Upon Tyne
REVIEW RETURNED	13-May-2014

GENERAL COMMENTS	This paper is an important addition to tools available to systemically measure harm. Using retrospective case note for review: rather than just reading skimming the case notes, the tool changes this into a structural task that focused in on errors when any of the triggers were found. This paper is a survey of its use in real life across a number of sites giving prevalence rates. It does not attempt to compare an unstructured case note review to this structured case note review so we do not know the sensitivity of the trigger tool or whether it saves any time or not. It also does not mention whether any other errors were detected outwith the triggers just by scanning the notes – the trigger PO1 (others) making up just <1% of all triggers might be that but it was not made clear in the text. The abstract should be changed to state that the aim is to pick up harm using retrospective case note review. How the paper as it is currently presented suggest that this type of case note review is comprehensive. What is universally accepted is that not all harm is recorded in writing and much is overlooked and never documented. I am rather troubled by the low return rates of some hospitals. Each unit was instructed to submit 20 case notes per month over 3 years yet some units only submitted reviewed 12 notes in the whole study period. Some explanation should be given. Maybe it was an implementation issue and that would be interesting for readers to know why some found it difficult to implement (e.g. cost, resources, engagement etc) Minor points: Abstract 1st sentence typo – ‘is the now’ Quite a few grammatical errors which make the abstract flow poorly e.g. page 3 line 11 ‘some is serious’ should read ‘are serious’ Introduction I felt it would be useful to move much of this useful text to the discussion and have a succinct introduction describing why they did the study. Discussion P11 line 40 – authors mention that gtt is cost effective but does not support that statement with any evidence. In summary this is a useful addition to the understanding of the prevalence of harm and the types of harm in retrospective case note review in children’s units in a developed healthcare system. There is nothing similar in scope in paediatrics in the literature. Their recommendation of increasing its use in hospital is a worthy aim measuring harm is the first step to reducing harm.

VERSION 1 – AUTHOR RESPONSE

Reviewer 1 - Q1
I am not quite clear how and why there is a need to develop the UK Paediatric Trigger Tool? The authors stated a Canadian one already exists, so why not used this in the UK? The authors claimed the Canadian was not published but later on, they quoted the findings using the Canadian tool (Ref: 25). If this is the case that the Canadian tool was not published, why the authors decide not to validate this but decide to invent a new one? Certainly this would not help in promoting to use a universal tool? Could the authors provide some additional justification for using the UKPTT?

Response to Q1
The reviewer asks a valid question. At the stage of developing and implementing the UK version (2008) the Canadian version had not been published and was in evolution. The purpose of developing a UK version was to build local consensus on the triggers, as well as redefining the triggers that were used to UK definitions. Finally the UK PTT is shorter than that in the Canada. The Canadian study published in 2011. In the USA there has been recent development of a USA version.

Reviewer 1 - Q2
I understand the UK NHS Institute (page 9, line 9) website will soon understand the UK NHS Institute (page 9, line 9) website will soon deactivated, may be this tool could be update as supplementary information

Response to Q2

This is noted and has been changed

Reviewer 1 - Q3
Sample were recruited from a range of hospitals including children hospitals and district general hospitals. Would the authors consider this is a homogenous group? If not, what is the rationale of including these specialities? The fact there appears to be a mix of sick children may present different confounding variables

Response to Q3

This is not a homogeneous group and reflects the patient mix across the spectrum of hospital paediatrics in the UK. The hospitals self selected. The aim was not to compare hospitals. The methodology allows for collation of harm but not for comparison between sites. The variation in harm rates between hospitals is acknowledged and is discussed in the paper.

Reviewer 1 - Q4

The authors quite rightly highlighted the limitation of the study. Why were they decided not to do sample size calculation? In the current study, specific hypotheses are not given. Sample size appears to be determined by convenience and not justified was given.

Response to Q4

We did not calculate a sample size. We were aware of the rate of entries coming into the portal and selected to study the entries from Feb 2008 to November 2011 for convenience when we estimated there would be 4000 inputs. There was never any intention to compare between groups in the study.

Reviewer 1 - Q5

I think there is still a valid clinical need to validate the UKPTT before implementing in hospital setting. Best would be to audit its yield in clinical practice. If the tool is proven not valid, all the subsequent analysis is erroneous.

Response to Q5

We respectfully disagree on this point. The methodology has been validated in numerous papers, which we reference. One of the outcomes of this paper is to assess which triggers actually indicate harm – and this is demonstrated in the PPV. We have expanded this point further now within the paper.

Reviewer 2 - Q1

It also does not mention whether any other errors were detected without the triggers just by scanning the notes – the trigger PO1 (others) making up just <1% of all triggers might be that but it was not made clear in the text.

Response to Q1

The reviewer is correct in that the "other" category picks this up. We have updated the text to clarify this.

Reviewer 2 - Q2

The abstract should be changed to state that the aim is to pick up harm using retrospective case note review. How the paper as it is currently presented suggest that this type of case note review is comprehensive. What is universally accepted is that not all harm is recorded in writing and much is overlooked and never documented.

Response to Q2

We have changed the abstract as recommended

Reviewer 3 - Q3

I am rather troubled by the low return rates of some hospitals. Each unit was instructed to submit 20 case notes per month over 3 years yet some units only submitted reviewed 12 notes in the whole study period. Some explanation should be given. Maybe it was an implementation issue and that would be interesting for readers to know why some found it difficult to implement (e.g. cost, resources, engagement etc)

Response to Q3

The reviewer is correct in that the sites varied in the completion of the tool. We have included all the reported portal entries except those 4 hospitals which completed less than 10 reviews (as per the text). We believe including all adds to the understanding of harm. But those that did drop out (this was all voluntary and we did not actively recruit) may have done so for numerous reasons and we have noted some including time and resources.
Introduction

Reviewer 2 - Q4

I felt it would be useful to move much of this useful text to the discussion and have a succinct introduction describing why they did the study.

Response to Q4

We have followed the reviewer's suggestion and reorganised the text.

Reviewer 2 - Q5

Typos

Response to Q5

All corrected

Reviewer 2 - Q6

Discussion, P11 line 40 – authors mention that gtt is cost effective but does not support that statement with any evidence.

Response to Q6

We have removed this claim