Reviewer’s report

Title: Does implementation of the PECARN rules for minor head trauma improve patient-centered outcomes in a lower resource emergency department: A retrospective cohort study

Version: 0 Date: 14 May 2020

Reviewer's report:

I think you make an interesting point that PECARN rules may not help when clinical acumen is already used widely (ie, in a resource limited setting). I did have some questions and comments, though. I don't think they would alter your paper, but perhaps might answer some questions before they come up later.

When you talked about "lower resource setting" initially, I was thinking that you meant it was more difficult to get a CT, in which case the use of the PECARN rules would be ideal. But, were you talking about QI and administrative resources?

When making the point of talking about lack of QI and administrative resources, the concept is brought up without much explanation. It might be worth it to describe what you mean prior to make the conclusion that such resources would have been beneficial.

What was rates of CTs on "trivial" injury mechanisms? Did this rate fall also after implementation of the rules?

Perhaps describing how orders are placed in your ED would be helpful, as well as what is available from the standpoint of followup. You bring up electronic order sets; this was surprising to me as the whole time, I was assuming that you had electronic orders. However, looking at Figure 1, I wonder if you are on paper for all documents? Or just for your orders?

P4, line10: add comma after "variable"

P6, line 1: can delete "hereafter referred to at the PECARN rules." This was already stated earlier.

P6, line9-10: When you talk about education for the providers, was this just an email? Lecture?

P6, line14-15: You make a point of talking about lack of QI teams and less experience in specialized QI intervention efforts. Why are you specifically bringing this up? It seems like you are implying something about this, but don't say what in detail.

P7, line 14: maybe mention the number of those that were excluded for the listed exclusion criteria and then refer to Figure 1.

P8, line 1: could there have been a change in presentations/verbiage used due to the education done about the rules?
How were these cases pulled? By chief complaint? By billing diagnosis?

P8, line 6: how were these pts diagnosed with ciTBI?

P8, line 8: do patients not routinely go home with discharge instructions? Or were you referring to a specific handout on head injuries?

P8, line 9: there's a decimal point missing in the p value

P8, line 11: add in a comma before "nor"

P9, line 7: add a semicolon before "and"

P9, line 20: add "that" before "their"

P9, line 8: of those that were admitted on bounce back, what happened? What were their diagnoses?

P10, line 8: add commas around "more specifically". Add "the" before "Lebanese"

P10, line 9: break this sentence into 2 sentences. Everything after the semicolon is a sentence fragment.

P10, line 14: overall CT scanning rates for all ages? Just pediatric? For all diagnoses?

P11, line 3: add a comma before "compared"

P12, line 18-19: change to "a surgical, emergency, or family medicine, rather than a pediatric or pediatric emergency, background"

P12, line 20: maybe add "individual" before "provider" to stress that it is the individual provider factors that weaken the impacts of the rules, rather than class of provider factors.

P13, line 16: change "study" to "study's"

P14, line 8: delete the first "be"

P25, line 12: for the age variable, is this measurement in months or years?

P25, line 17: perhaps delineate what the "severe mechanism of injury" were? I'm assuming you're using what was described in the PECARN paper. If so, you would just need to specifically say that.

P26, line 23-26: You list essentially negative CTs and "positive findings," but they don't add up to the total number of CTs obtained. What were the remainder diagnosed with?
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

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I am able to assess the statistics

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