Citation for final published version:


Publishers page: http://dx.doi.org/10.1016/j.jpeds.2016.01.021
<http://dx.doi.org/10.1016/j.jpeds.2016.01.021>

Please note:
Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher’s version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See http://orca.cf.ac.uk/policies.html for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.
To the Editor,

We read with interest the theoretical impact analysis of a screening tool for pediatric abusive head trauma\(^1\), the third in a series of articles regarding the tool\(^2, 3\).

We are concerned about the inherent circular reasoning associated with the application of the authors’ a priori definitional criteria for abusive head trauma as a reference standard against which to compare the performance of their tool. Items in the screening tool (e.g. bruising of the ear, neck or torso) appear in the a priori definitional criteria (e.g. skin bruising, abrasions or lacerations in two or more distinct locations other than the knees, shins or elbows), thus potentially introducing incorporation bias \(^4\).

No references are provided for the extensive list of extra-cranial injuries within their a priori definitional criteria “considered moderately or highly suspicious for abuse,” for example ‘dry contact burns’ and ‘intra-abdominal injuries’.

The authors estimate that 12/58 higher risk children not evaluated for abuse were abused. However it is a logical fallacy to assume that these 12 children must therefore have had positive findings on their skeletal survey and/or ophthalmology exams.

Probability estimates were calculated by implicitly fitting a saturated model, with one probability for each combination of features. These could have alternatively been estimated by fitting a simple logistic regression model. This would have improved estimation of the variance, by permitting information borrowing across categories.

References

