CRITICAL REVIEW FORM: CLINICAL PREDICTION RULE

Citation:

Zemek R. et al. Clinical Risk Score for Persistent Postconcussion Symptoms Among Children With Acute Concussion in the ED. JAMA 2016; 315(10):1014-1025..

Guide		Comments
I	**Is this a newly derived instrument? (LEVEL IV)**	
1	**Was validation restricted to the retrospective use of statistical techniques on the original database? (If so this is a Level IV rule). If so, consider the following standards for initial development of a decision rule.**	
1a	Were all important predictors included in the derivation process?	
1b	Were all important predictors present in significant proportion of the study population?	
1c	Does the rule make clinical sense?	
II	**Has the instrument been validated? (LEVEL II or III) If so, consider the following.**	
1	**Did validation include prospective studies on several different populations from that used to derive it (II), or was it restricted to a single population (III)? How well did the validation exercise meet the following criteria:**	
1a	Were the patients chosen in an unbiased fashion and do they represent a wide spectrum of severity of disease?	
1b	Was there a blinded assessment of the criterion standard or outcome event (or was the outcome all-cause mortality) for all patients?	

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1c	Was there an explicit and accurate interpretation of the predictor variables and the actual rule without knowledge of the outcome?	
1d	Was there 100% follow-up of those enrolled?	
2	**How powerful is the rule (in terms of sensitivity and specificity; likelihood ratios; proportions with alternative outcomes; or relative risks or absolute outcome rates)?**	
III	**Has an impact analysis demonstrated change in clinical behaviour or patient outcomes as a result of using the instrument? (LEVEL I) If so, consider the following.**	
1	How well did the study guard against bias in terms of differences at the start (concealed randomization, adjustment in analysis) or as the study proceeded (blinding, co-intervention, loss to follow-up)?	
2	What was the impact on clinician behaviour and patient-important outcomes?	