

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?

Guide		Comments
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?	