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| **PEDIATRIC EMERGENCY MEDICINE CRITICAL ARTICLE REVIEW (PEMCAR)** | |
| QUESTION |  |
| TYPE |  |
| TOPIC |  |
| DATE |  |
| REVIEWER |  |
| CITATION |  |

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| **STUDY DEFINITIONS** | |
| Population | Inclusion -  Exclusion - |
| Intervention |  |
| Control |  |
| Outcome |  |
| Design |  |

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| **CRITICAL REVIEW FORM - DERIVATION OF A CLINICAL DECISION RULE** | |
| **Are the Results Valid?** | |
| Were all important predictors included in the derivation process? |  |
| Were all important predictors present in significant proportion of the study population? |  |
| Were the outcome event and predictors clearly defined? |  |
| Were those assessing the outcome event blinded to the presence of the predictors and were those assessing the presence of predictors blinded to the outcome event? |  |
| Was the sample size adequate (including an adequate number of outcome events)? |  |
| **What are the Results?** | |
| How well did the rule correctly identify patients with the primary outcome? How precise was this measurement?  (Sensitivity and Predictive Value of a Negative Rule with 95% confidence intervals) |  |
| How well did the rule correctly identify patients without the primary outcome? How precise was this measurement?  (Specificity and Predictive Value of a Positive Rule with 95% confidence intervals) |  |
| How would use of the rule impact resource utilization? |  |
| Was there an internal statistical validation of the results? How did it compare to the primary results? |  |
| **How can I apply the Results to Patient Care?** | |
| At what level of development is this rule? How can it be applied?  (see appendix) | □ I □ II □ III □ IV |
| Does the rule make clinical sense? |  |
| Will the reproducibility of the rule and its interpretation be satisfactory in my clinical setting? |  |
| Is the rule applicable to the patients in my practice? |  |
| What are the benefits of applying the rule to my patients? |  |
| What are the risks of applying the rule to my patients? |  |

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| **CLINICAL BOTTOM LINE** |
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**APPENDIX – STAGE OF DEVELOPMENT AND APPLICABILIY OF CLINICAL DECISION RULES**

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| **Level** | **CRITERIA** | **APPLICABILITY** |
| I | ■ >= 1 prospective validation in population  separate from derivation set  ■ Impact analysis with change in clinician  behavior and benefit | Use rule in wide variety of settings with confidence |
| II | ■ Validated in 1 large prospective study  including a broad spectrum of patients  or in several smaller settings that differ  from each other.  ■ No impact analysis | Use rule in wide variety of settings with confidence in the accuracy of the rule but no certainty that patient outcomes will improve |
| III | ■ Validated in 1 narrow prospective  sample | Consider use with caution and only in patients similar to the study population |
| IV | ■ Rule has been derived only or validated  only in split samples, large retrospective  databases or by statistical methods | Requires further validation before it can be applied clinically |