
We commend the authors for undertaking a systematic review on this topic, but we have serious reservations about their methods and conclusions.

Clinical prediction rules (CPRs) or clinical decision rules can be used to make a diagnosis, predict disease progression, predict prognosis, or select therapy. Beneciuk et al reviewed CPRs that were developed to select therapy but then evaluated the quality of these CPRs using criteria designed for prognosis studies. This is unfortunate because the optimal design and analysis strategies for a prognosis study are not the same as for an intervention study. For example, randomization and concealed allocation are regarded as important design features of studies evaluating therapy but are not relevant in a prognosis study because there is no control group. Accordingly, the authors’ comments about the methodological quality of the studies they have reviewed are in doubt because they have used the wrong yardstick to judge quality.

We also are concerned that the authors encourage the use of CPRs before their value has been clearly established. They confined their review to CPRs that were still in the derivation stage but then concluded that “several CPRs may be appropriate for clinical applications involving patients and clinical environments similar to those used in the CPR derivation process.” This conclusion ignores guidelines for CPR development that recommend a 3-step process:

- derivation (level of evidence: 4),
- validation (narrow—level of evidence: 3; broad—level of evidence: 2),
- impact analysis (level of evidence: 1).

It is recommended that a CPR only be applied after there is at least level-3 evidence (narrow validation) and then only if the population being treated matches that of the population used to derive the CPR.

We feel that CPRs for selecting therapy have the potential to greatly enhance patient management by physical therapists, but we would caution that premature promotion of inadequately evaluated CPRs is unwise. McGinn and colleagues provide 3 reasons why CPRs that have been derived but not validated are not ready to be applied clinically. First, CPRs may reflect associations that are primarily due to chance; second, predictors may be specific to the setting of the study; and third, clinicians may fail to implement a CPR successfully in the clinical setting.

In any case, suggesting that a derivation-stage CPR is applicable in a clinical setting promotes improper use of research findings. Our patients deserve a more rigorous approach to physical therapist practice.

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References


Author Response

We thank Stanton et al for taking time to provide feedback on our recent publication in PTJ.

The purpose of our systematic review was to provide quality ratings for physical therapy–specific clinical prediction rule (CPR) derivation studies. It was our suspicion that CPR derivation studies reported in the physical therapy literature frequently used cohort/prognostic study designs. This suspicion was confirmed when we found that 9 out of the 10 retrieved studies used cohort/prognostic designs. Therefore, we believe our “yardstick” was consistent with our original intent. It may become necessary to implement other quality assessment criteria as physical therapy CPRs evolve to include other methods, but the current tool was appropriate for the studies included in the review.

Stanton et al selected a sentence from our article to indicate that we encouraged clinical use of CPRs prior to validation. Missing from their response letter were the parts of the article in which we indicated the role of validation studies.