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Title: Standardizing Clinical Reasoning Assessment in Preclinical PA Education

Background: Objective measures lend themselves to the best reliability but may fail to deliver validity in the complex assessment of clinical reasoning. Subjective assessments of clinical reasoning by practicing clinicians has been the historic evaluation method at the Wake Forest School of Medicine Department of PA studies in preclinical education during standardized patient encounters. This introduced potential for poorly standardized assessments, grade inflation, and improper student identification for remediation.

Objectives: Qualitatively assess variance of clinical reasoning grades assigned by faculty to the standard of that from course directors.

Methods/Design: The study population includes 88 preclinical PA students in the Wake Forest School of Medicine class of 2020 and faculty evaluators over the course of one standardized patient assessment. Evaluating faculty completed an objective clinical reasoning grading rubric, which was blinded to exclude point values assigned for the quantitative score later tabulated by course directors. Evaluators also provided an overall subjective assessment of the students' clinical reasoning performance based on their own clinical judgement.

Subjectively assigned grades included the categories of Honors (numerical correlate 97), Competent (87), Concern (75), and Failure (60). Quantitative scores from the rubric were then calculated and plotted against the subjectively assigned grades. Identified outliers were reviewed by course directors with grade changes implemented with consensus among a panel of four consulting clinical faculty.

Results: A total of 88 grades were reviewed in graph form. Twenty-nine were identified for panel review. Eleven grades were changed with panel consensus, representing 12.5% of grades assigned. Four (4.5%) were changed from Honors to Competent, one (1.1%) from Competent to Concern, one (1.1%) from Concern to Failure. Five (5.7%) were changed from Concern to Competent.

Conclusions: Comparing subjective and objective measures of clinical reasoning in high stakes testing has improved standardization of assessment and allowed for appropriate identification

of students for clinical reasoning remediation while reducing grade inflation. Further evaluation is needed to determine if appropriate identification and remediation of errors in clinical reasoning in the preclinical setting improves performance in clinical education.