

Assessment of Resident's Knowledge by Core Competency Based Evaluations

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Learner Audience: Program Directors and Residents

Background: The evaluation of anesthesiology residents and their performance in the ACGME core competencies by faculty is an important part of a residency program. One of the current methods used to evaluate residents at our institution is a computer based evaluation system. This system allows faculty to rate residents on a daily basis in the six core competencies including medical knowledge. Since medical knowledge can be evaluated in different ways, it is important to assure that this subjective evaluation system is valid and correlates with more objective measures of this competency. This study aims at establishing a correlation between medical knowledge scores given by faculty in their daily evaluations and resident scores on the anesthesiology in-training exam (ITE).

Hypothesis: There will be a positive correlation between the medical knowledge evaluations given to residents by faculty and their scores on the ITE.

Curriculum Design: The data was obtained from four consecutive years of clinical anesthesia (CA)-3 residents. The average medical knowledge score given by multiple attending physicians over their CA-1 and CA-2 years of training was compared to their percentile score on the ITE at the beginning of their CA-3 year. The medical knowledge score is based on a scale from 1-9 (1-3 unsatisfactory, 4-6 satisfactory and 7-9 superior).

Outcome: Using Pearson's test for association/correlation between paired samples, there is a significant correlation of 0.447 ($p = 0.007$) with a 95% confidence interval of (0.204-0.638) between average medical knowledge evaluation scores and percentile achieved on the in-training exam in the CA-3 year. This supports our hypothesis. It can be concluded that this evaluation system is a valid method for assessing residents' medical knowledge. While this outcome suggests the ability of faculty to adequately assess one of the core competencies, more studies need to be conducted to find results for the other competencies.

