

Comparison of Methods for Evaluating Resident Knowledge

T. Edwards and H Westman
University of Pittsburgh Medical Center

Introduction

Any anesthesiology residency would like to identify the resident with knowledge problems before the resident begins to fail rotations or is unlikely to pass certification examinations following graduation. This study was undertaken for the short-term goal of examining the correlation between different methods currently in use in our program for assessing resident knowledge. The long-term goal is the completion of a longitudinal study examining resident performance in order to facilitate the early identification of residents likely to develop knowledge problems in our program.

Methods

A database was formed using resident demographic data, information from various assessments of resident knowledge, and resident performance outcomes. Information was obtained from the resident portfolios and residency files by the chair of the Evaluation and Competence Committee, and the data de-identified for analysis. Demographic data include the date of birth, sex, number of children, whether the resident is a graduate of an American medical school or the University of Pittsburgh School of Medicine, rank number from the NRMP, type of internship, and the dates on which the resident entered and completed our program. All methods of assessing resident knowledge used in our program are recorded in the database; these include USMLE scores, existence of failures on parts of the USMLE examinations, ABA In-Training Examination scores (ITE), Anesthesia Knowledge Test scores (AKT), global faculty evaluations, number of comments that are either favorable or unfavorable regarding knowledge on the faculty evaluations, rotation evaluations, number of comments that are favorable or unfavorable regarding knowledge on rotation evaluations, number of favorable or unfavorable communications outside of the formal evaluations concerning resident knowledge received by the program, the number of scholarly projects that received recognition outside of the residency program, scores of mock-oral examinations administered by the program, and the results of mock-oral examinations given as part of the subspecialty rotations. Outcome data include the number and severity of official actions on the part of the Evaluation and Competence Committee, as well as the number and severity of instances when unsatisfactory knowledge was reported on the Clinical Competence Reports to the ABA. The dates on which the ABA written and oral examinations are passed will also be recorded.

Results

The results do not yet permit statistical analysis, but several trends are emerging. Only two residents have had an unsatisfactory score for knowledge on faculty evaluations, despite numerous remarks from the faculty to the contrary on a number of residents. The number of negative comments on the faculty evaluations in any given quarter is predictive of future academic problems. Any negative communication outside of the formal evaluation system concerning resident knowledge is strongly predictive of problems and warrants consideration by the Evaluation and Competence Committee. Many residents who have clinically-evident knowledge deficits, as evidenced by unfavorable faculty comments, have had poor performance on the ITE, although their AKT scores were satisfactory.

Discussion

We plan to continue this study until our current CA1 class graduates and completes their certification examinations, and possibly longer. We will then have complete data for at least one class using our current evaluation system, which was revised to better reflect evaluation of the ACGME general competencies.

References

Dauphinee, W.D., "Assessing Clinical Performance: Where Do We Stand and What Might We Expect?", *JAMA*, 1995, 274 (9): 741-743.