

TITLE: IS ANESTHESIA EXTERNSHIP A PREDICTOR OF FUTURE RESIDENT PERFORMANCE?

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Introduction. The selection of residents in anesthesiology is a difficult task facing all selection committees. A previous study by Warrick and Crumrine,¹ has attempted to identify predictors of success in anesthesiology residency training. The medical student anesthesia externship program has been described in the literature.^{2,3} It has been found to be a recruiting tool, a mechanism for providing service to the department, and a means of familiarizing students with our specialty who might not have otherwise been exposed. Our department has had an externship program for over 40 years. While most of our externs entered specialties other than anesthesia, the ones who entered our program appeared to perform better as residents than those without a prior externship. In this study we compared the performance of a group of externs on the ABA intraining exam with the performance of residents who did not have the benefit of an externship. Our goal was to determine if the anesthesiology medical student externship was a predictor of resident success.

Methods. 24 residents' ABA intraining scores were evaluated during the 1985 and 1986 intraining examination of the ABA. The scores were compared at the PGY II level. Group A consisted of five residents who had participated in the anesthesia externship program during medical school years. Group B (N=19) were those residents who had not. The students T test for unpaired data was used. $P < .05$ was considered significant.

Results. Mean scores for Group A (externs) at the PGY II level was 504 ± 75.03 . Group B (non-externs) was 368 ± 96.21 . The difference was significant at $p < .005$ level. The national average for PGY II level was 377. There were no significant age differences between the two groups.

Discussion. The residents who had served as anesthesia externs performed significantly better than other residents in our program. Their performance was also substantially better than the national average for PGY II residents. Scores from the PGY I level were not compared because familiarity with anesthesia practices may have altered results. We felt that after one year of clinical anesthesia training any differences due to familiarity would be reconciled. PGY III scores were not yet available for the extern group. The externs were not selected on academic achievement. The positions were simply advertised to the medical school class as a whole. The positions were filled based upon faculty interviews. Generally two to three positions are available each year. To briefly describe the externship program, the candidate must be a medical student, have all passing grades and be willing to work up to six nights per month. A training period usually 2 1/2 months long is given during scheduled operating

hours under the direction of a physician anesthesiologist. Duties include room preparation, assistance with patient care, serving as a "helper" to obtain blood, fluids, drugs and equipment, and to perform blood gas and electrolyte analyses in the Operating Room laboratory. This coverage is provided at night and on weekends. The benefits to the extern include a salary and benefits (approx. \$5.00/hr), meals while working, valuable clinical experience, and the opportunity to observe different specialties prior to making a career choice. Our experience has been that 25-35% of externs ultimately choose anesthesiology as a career.

It is possible that motivation is responsible for our results. In a previously published study, the best predictor of resident success was the number of years spent in other specialties. No significant correlation was found between intraining examination scores and National Board Scores, undergraduate grade point average or non-academic variables such as age or parents level of education.¹ In summary we believe that participation in our Anesthesia Medical Student Externship Program is a predictor of success on the ABA intraining examination.

References.

1. Warrick, S.S., Crumrine, R.S.: Predictors of Success In an Anesthesiology Residency, *Journal of Medical Education* 61:591-595, 1986
2. Mantia, A.M., Berkebile, P.E.: The Medical Student Anesthesia Externs, *Anesthesiology Review* 13:35-41, 1986
3. Johnston, J.F., DeVore, M.B.: Editorial, The Medical Student Anesthesia Externs, *Anesthesiology Review* 13:41-43, 1986