

Development of a Testing Program to Evaluate Anesthesiology Residency Applicants and Record Their Progress during Clinical Residency Training.

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Introduction: Selection of residents into anesthesiology programs is usually based on results of USMLE examinations, letters of reference and a personal interview, which may be very subjective. There is no test for anesthesiology residents that will assess individual skills and behavior in stressful operating room (OR) situations. Theoretical knowledge, development of manual skills, and development of clinical judgment are essential for anesthesiology residents. Clinical judgment is a part of non-technical skills, skills that do not relate to medical knowledge or technical procedures but assess such skills as decision making, situation awareness and interpersonal skills. Progress in the area of non-technical skills should be monitored and recorded during residency. Some anesthesiology residents, after being admitted to an anesthesiology program, have problems with multitasking in the OR, and personalities that hinder them from accomplishing the goal of excellent anesthesia and patient care. Evaluations of anesthesiology residents by clinical competency committees might be quite subjective. An objective tool as testing program for selection and performance assessment would significantly improve the quality of anesthesia providers.

Methods: To potentially improve resident selection, their migration between different programs, and subsequent evaluation in anesthesiology programs during training we are developing a testing program, which will include questions from Vigil, the Paced Auditory Serial Addition Test, the California Personality Inventory, the State-Trait Anxiety Inventory, testing of non-clinical skills and an academic performance test. Anesthesiology residency applicants will be tested and residents will be voluntarily tested twice a year and test scores will be recorded. Practical application of this program starts with 82 residents currently enrolled in our program. Test scores will be compared with overall clinical performance and also with certain cognitive and personality variables. Potentially, testing may be conducted on some individuals after they graduate from the anesthesiology residency program. This is an ongoing project and is implemented as a Macromedia application with web interface, easily distributable as a CD or web accessible using the internet.

Results: This testing will aid our ability to select residents that will be successful in anesthesiology residency programs. Furthermore this protocol would permit a more individualized approach and give faculty the opportunity to concentrate on deficiencies of every anesthesiology resident. Specific work on development of non-clinical skills is very important. We expect to develop a testing program that we can use for selection of anesthesiology residents, and an objective assessment during training. Results are ongoing and cumulative and we are seeking feedback from residents and attending physicians.

Discussion: Anesthesiology training combines clinical work in the OR and didactic training during a three-year period. Manual skills are mastered during simulation sessions and in the OR along with clinical judgment. Non-clinical skills are very important and often are not taught in anesthesia programs. Wide use of teaching and educational programs along with testing programs in the anesthesiology

curriculum will improve quality of anesthesiology providers. Testing can improve the selection process for anesthesiology residents, and encourage individual anesthesiology training.

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