

**Middle Tennessee School of Anesthesia**  
**Quality Enhancement Plan – Executive Summary**  
*Academic and Clinical Enhancement through Simulation (ACES)*

Middle Tennessee School of Anesthesia (MTSA) is a single purpose, anesthesia specific, graduate degree granting institution. MTSA is small when compared to many educational institutions, admitting 72 students per year into the 28 continuous month program. The maximum enrollment is 216 students. Each annual class of 72 students progresses through all courses simultaneously as a cohort.

Nurse anesthesia educational programs have two (2) distinct foci, academic education and clinical experience. Many schools of anesthesia conduct the education of nurse anesthetists in a front-loaded format, where students are fully engaged in academic studies with no or minimal clinical experience for approximately one (1) year; then students begin the clinical portion of the program. However, MTSA integrates and conducts these two (2) foci throughout its program, where academic learning and clinical experiences occur concurrently, which is similar to recommendations by some educational theorists for experiential learning (Dewey, 1938). The first six (6) weeks of students' education at MTSA is an intensive orientation to the basics of anesthesia and focuses on preparation for entry into the operating room. The subsequent first year of education is equally divided into classroom/didactic learning and clinical experiences. The second year involves approximately 90% clinical experience and 10% review of didactic information and preparation for the National Certification Examination.

When considering the Quality Enhancement Plan (QEP), MTSA reviewed its outcomes in relation to admission data; graduation rates; students' average GPA earned at MTSA; graduates' National Certification Examination scores and pass rates, as well as benchmarking for pass rate percentile compared to the national pass rate; job placement rates; employer evaluations of graduates; graduates' evaluations of the program; and students' clinical case numbers. MTSA understands that to be successful in its mission, it must assure that its graduates are prepared to provide anesthesia in all types of clinical and geographic settings, including rural areas, where they are likely to be the sole providers of anesthesia. Traditionally, the preparation has been done through academic studies and clinical experiences, as outlined above. In recent years, faculty and students have witnessed technology developments that have the ability to transform how healthcare education is delivered. While there is no evidence that the traditional method has been unsuccessful, the relatively recent introduction of high fidelity human patient simulators into the educational milieu has the potential to enhance the way healthcare professionals are educated (Grooman, 2005). Thus, MTSA has chosen as its Quality Enhancement Plan *The Utilization of Simulated Learning to Enhance Students' Application of Academic Learning to Clinical Settings*. This title has been abbreviated to *Academic and Clinical Enhancement through Simulation (ACES)*.

While all indicators demonstrate that MTSA is doing a good job with educating the next generation of nurse anesthetists, MTSA believes that students' learning can be enhanced by developing a simulation program where, after pre-simulation teaching, students are exposed to simulated patient events where they are the primary caregivers. Another aspect of this plan includes faculty development regarding using simulation in scenario writing, conducting the simulation sessions, and debriefing. The ACES program began with a pilot phase in FY 2008-2009 and will take place over the successive five year period and conclude with a summative outcomes assessment. Therefore, through the implementation of this QEP topic, ACES, using simulation with all students, MTSA desires to enhance and accelerate the transfer of concepts students learn in the classroom about providing anesthesia to actual practice in the clinical area.

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