

## **Introduction of Formative Individual Simulations** *Third-Year Medical Student Mid-Year Intersession*

### **Goal:**

The purpose of this new simulation activity is to provide a formative, individual simulation scenario and debriefing for 192 third-year medical students at the Medical College of Georgia during the mid-year intersession occurring between their clerkship rotation blocks. This simulation is designed to promote feelings of patient ownership and facilitate professional identity formation for students while they still remain largely in the periphery of patient care in their clinical education.

### **Background:**

To effectively educate physicians, medical schools must provide students with a wide range of clinical experiences. These experiences serve as situated cognition learning environments in which students can apply their knowledge, learn new skills, and begin to assume the identity of a physician in the same context where those skills and role will be applied later in their career, so that the knowledge is more easily recalled when necessary (Brown, Collins, & Duguid, 1989). However, within clinical experiences, there are limitations: not all students are exposed to the same patient cases, and students often cannot provide direct care for patients due to the obvious safety concerns with novice learners. Simulation leverages the benefits of situated cognition theory to engage learners in a facsimile of the environment in which they will later apply their knowledge clinically, while both posing no risk to patients, and allowing for standardization of the cases that students are exposed to (Paige & Daley, 2009). Simulation recreates the clinical environment with a reasonable degree of similarity so that facilitators may observe performance and provide focused feedback to the learners (Owen, 2016). Simulation is proven to be a safe, objective, resource-efficient modality through which to model and assess clinical skills, behaviors, and cognitive processes (Bradley, 2006; Cooper & Taqueti, 2004).

Medical students at the Medical College of Georgia begin their clerkships in their third year. There are two core blocks of rotations, categorized generally as being “acute rotations” and “outpatient rotations.” The acute rotation block includes Internal Medicine, Surgeries, Neurology, and Psychiatry. The outpatient rotation block includes Pediatrics, OB, and Family Medicine. While third year students may complete each of their block’s rotations in a different order, students remain within the two rotation blocks until the mid-year, when they switch from one rotation block to the other.

Third year medical students at the Medical College of Georgia at Augusta University participate in a mid-year intersession in which they have a set of structured events tailored to their level of training. This occurs at the end of the Fall semester, after students have completed one of their clerkship rotation blocks. The experience includes an Objective Structured Clinical Examination (OSCE), ultrasound training, and academic advising. This will be the first time a high-fidelity simulation event will be conducted as part of the mid-year experience for third year medical students. The entire experience, including the simulated clinical case, will be a required curricular activity for all third-year students.

### **Assessment and Evaluation:**

While no performance data will be reported for students, the rank-order of behaviors they exhibit within the simulation will be recorded by facilitators, de-identified, analyzed in order to identify any relationships between third year medical students' early clinical experiences on their clinical reasoning abilities. A survey instrument will also be distributed to obtain programmatic feedback from these students on their experiences with the simulation, and their feelings of patient ownership and professional identify formation.

The analysis will explore the effects of third year medical students' first clerkship experiences on their clinical reasoning abilities and professional identify formation. Because third year students will have completed one of two different rotation blocks at this point in the year, it is an opportunity to measure the effects of the different clinical experiences on students' performance within the simulation. Clinical reasoning is a higher order thinking skill in which health professionals apply non-linear analytical reasoning to the diagnosis, care, and treatment of a patient. The formative, low-stakes simulation introduced in the mid-year experience will provide students with the opportunity to make clinical decisions, including ordering tests, collecting subjective data, making management decisions, and calling for consultations and assistance. By assessing the order and timing in which students perform these actions during the simulation, students' ability to prioritize in an emergent event may be evaluated. Because students will be performing in the role of a clinician, data can be collected in order to evaluate the ways in which students may be beginning to identify with the role of physician, and the effects their early clerkships have had on their professional identify formation.

This is the first-time a simulation has been incorporated into the mid-year intersession, so it will be important to obtain feedback and insight from students in order to understand their experience and to iteratively improve future simulation events. The survey instrument will collect students' reported satisfaction after the simulation for the purpose of program evaluation.

It will also be important to explore the experiences of the faculty who are recruited to facilitate the simulations, many of whom have not facilitated simulations previously. A survey instrument will be distributed to faculty to explore their perceptions of the simulation facilitator experience. Because of the range of prior simulation experience the faculty bring to the mid-year simulations, the debriefings will also be assessed to determine how the training materials developed for the experience affected faculty's debriefing behaviors.

### **Proposal:**

By introducing this time-limited, formative simulation to third-year medical students, the Educational Simulation program will be able to collect data to assess educational and developmental outcomes, provide students with a valuable, low-stakes simulated clinical experience, and continue to improve faculty development for future simulations.

**References:**

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