

## **UC Irvine**

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Effective Implementation of Virtual Team-Based Learning

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<b>Figure 1</b>		<b>Control Arm</b>	<b>Intervention Arm</b>
<b>Age</b>	<b>Mean (SD)</b>	<b>28.54 (2.15)</b>	<b>28.77 (3.54)</b>
<b>Gender</b>	<b>Male</b>	<b>5 (38.4%)</b>	<b>5 (38.4%)</b>
	<b>Female</b>	<b>8 (61.5%)</b>	<b>8 (61.5%)</b>
<b>How prepared do you feel to interpret ECG's on your own?</b>	<b>Very Unprepared</b>	<b>0</b>	<b>0</b>
	<b>Somewhat Unprepared</b>	<b>3 (23.1%)</b>	<b>1 (7.7%)</b>
	<b>Neutral</b>	<b>2 (15.4%)</b>	<b>1 (7.7%)</b>
	<b>Somewhat Prepared</b>	<b>8 (61.5%)</b>	<b>8 (61.5%)</b>
	<b>Very Prepared</b>	<b>0</b>	<b>3 (23.1%)</b>
<b>How prepared do you feel to manage patients with abnormal ECG's?</b>	<b>Very Unprepared</b>	<b>0</b>	<b>1 (7.7%)</b>
	<b>Somewhat Unprepared</b>	<b>2 (15.4%)</b>	<b>0</b>
	<b>Neutral</b>	<b>2 (15.4%)</b>	<b>1 (7.7%)</b>
	<b>Somewhat Prepared</b>	<b>9 (69.2%)</b>	<b>10 (76.9%)</b>
	<b>Very Prepared</b>	<b>0</b>	<b>1 (7.7%)</b>
<b>How comfortable are you with identification of ischemia on ECG's?</b>	<b>Very Uncomfortable</b>	<b>0</b>	<b>0</b>
	<b>Somewhat Uncomfortable</b>	<b>2 (15.4%)</b>	<b>0</b>
	<b>Neutral</b>	<b>2 (15.4%)</b>	<b>0</b>
	<b>Somewhat Comfortable</b>	<b>9 (69.2%)</b>	<b>8 (61.5%)</b>
	<b>Very Comfortable</b>	<b>0</b>	<b>5 (38.4%)</b>

and there is no documentation of longitudinal initiatives with residents as specialty-specific advisors to students throughout the four years of medical school.

**Educational objectives:** The goals of creating the RSEC were to strengthen the connection between students and EM residents, expand and improve the student educational experiences in EM, and foster resident career development through sustainable leadership and teaching opportunities.

**Curricular design:** Three divisions were created: (1) Preclinical Division aimed to increase student exposure to EM through didactics, skill sessions, simulation, and shadowing. (2) Clinical Division held teaching roles in simulation and skill sessions for rotating students and administrative roles to refine scheduling, create face sheets, and host socials. (3) Mentoring Division focused on advising students applying into EM through an informal series and 1-on-1 resident mentorship.

**Impact/effectiveness:** We successfully implemented sustained resident involvement into all four years of medical school. In the last year, there were 113 shadowing opportunities. Those that were rated were all 4-5 on a 5-point Likert scale. Didactics improved students' confidence in history and physical exam. 36 sub-internship students and 18 clerkship students participated in monthly ultrasound workshops, simulations, and socials. Nearly 30 students, both home and visiting, were assigned resident mentors and participated in 6 advising events. Looking ahead we hope to expand preclinical cases, build upon didactic and ultrasound sessions for clinical students and augment mentorship to include preclinical students.

## 13 Effective Implementation of Virtual Team-Based Learning

*Navdeep Sekhon, Adedoyin Adesina, Kathryn Fisher, Daniela Ortiz, Sarah Bezek*

**Introduction/ Background:** Team-based learning (TBL) is an active-learning didactic method. Multiple studies have shown that it helps learners retain medical knowledge and develop higher order decision-making. TBL has been shown to help students improve their teamwork and leadership skills. COVID-19 has shifted the educational climate to where students are more comfortable participating in learning activities virtually.

**Educational Objectives:** The objective of this innovation is to assess whether virtual TBL can be effectively implemented on the Emergency Medicine clerkship.

**Curricular Design:** A TBL session is composed of four components: the Individual Readiness Assurance Test (IRAT), the Team Readiness Assurance Test (TRAT), a group discussion of the IRAT and TRAT, and the clinical problem-solving activity. Using video-conferencing software, this was delivered virtually. The IRAT was a multiple-choice test that

## 12 Creation of a Residency-Based Medical Student Education Committee

*Danielle Kerrigan, Stephanie Hess, Anita Knopov, Christina Matulis, Eric Ebert, Kaitlin Lipner, Jeffrey Savarino, Brian Clyne, Jayram Pai*

**Introduction/ Background:** The Resident Student Education Committee (RSEC) is a novel approach to integrate and expand medical student education within an EM residency at a large academic center. Historically, little formal or sustained interaction existed between students and residents in the ED. There is a paucity of literature on such programs

was emailed to learners, and they were instructed to spend 10 minutes to complete it individually. After 10 minutes, the students were broken into breakout groups of 3-4 where they discussed the answers (TRAT). The students were then sent back to the large group where the questions were discussed by a facilitator. Next, the clinical problem-solving activity was conducted where learners were sent back to their breakout groups and worked through clinical cases. Each group was tasked to come up with three clinical questions based on the clinical cases that they would like to discuss in the large group and placed them in a shared Google doc. The students were then brought back to the large group where the facilitator led a discussion regarding the questions.

**Impact/Effectiveness:** We compared student perceptions of in-person and virtual TBLs assisting them to learn clinically applicable information. For in-person, the score was 4.53/5 (n=313) versus the virtual sessions score of 4.75/5 (n=103)(p=.008). This suggests that virtual TBLs can be effectively implemented.

## 14 Evolution of Medical Student Didactics: Using Simulation to Target High Acuity Clinical Topics Associated with Lower Examination Performance

*Damian Lai, Brent Becker, Nicole Peters*

**Introduction/ Background:** 4th year medical students planning on pursuing emergency medicine (EM) typically spend 4 weeks working in the emergency department (ED) during a rotation. Clinical exposure is paramount for these learners; however, students often assume a less active role in higher acuity and unstable patients. Consequently, it is difficult to assess their knowledge base and comfort level managing more critical patients. At our residency we emphasize simulation during didactics to provide students the opportunity to demonstrate their clinical knowledge, leadership and teamwork.

**Education objectives:** 1) Examine EM rotation examinations to identify topics on which medical students generally performed lower. 2) Design simulations to address these topics, increase knowledge retention and improve clinical comfort level.

**Curricular design:** Medical students complete a standardized multiple choice EM exam during their rotation that has remained largely constant over the past 5 years. We compiled the scoring data from a total of 121 students and identified 3 areas of lower performance related to high acuity patient care: Trauma, Seizures, and GI Bleed. Custom simulations focusing on these scenarios were added to existing simulations on respiratory distress and cardiac arrest. A standardized scoring rubric was used to assess medical student performance. Students reported their pre-

and post-simulation comfort level managing the 3 scenarios on 5-point Likert scales.

**Impact/effectiveness:** For applicants to residency in EM, the simulation scoring rubric provided an objective data point for the didactic scoring portion of their rotation grade. Comparison of paired pre- and post-simulation surveys via the McNemar's test (p=0.05) demonstrated a significant improvement in students' comfort level managing all 3 patient scenarios.

## 15 Expanding DEI Curricula in Emergency Medicine Graduate Medical Education: A Pilot Innovation Project

*Whiney Johnson, Leah Bauer, Xian Li, Patil Armenian, James McCue, Michelle Storkan, Stephen Haight, Sukhjit Dhillon, Lily Hitchner, Jessie Werner, Courtney Pettigrew, Rahul Rege, Camila Mateo*

**Introduction/ Background:** The ACGME has new requirements to address issues of diversity, equity, and inclusion. While it is unclear what the best method is for delivery of DEI education, this innovation aims to introduce a framework for a longitudinal curriculum that integrates directly into the EM residency weekly conference with the goal of educating physicians and prioritizing DEI in clinical practice.

**Educational Objectives:** This innovation is designed to: (1) recognize and discuss the impact of healthcare disparities in emergency medicine, (2) collaborate with members of the faculty and resident team to learn about and discuss the effects of health disparities, and (3) self-evaluate and reflect on their experiences and lessons learned.

**Curricular Design:** This longitudinal curriculum was designed the decision to create modules that integrate directly into weekly educational conference with a goal to eliminate the common practice of optional DEI education. Implementation directly into conference demonstrates the importance of showing learners that DEI is a vital component of practicing holistic medicine. The program was structured as modules with 5 core themes followed by targeted topics within those categories. There were 6, 2-hour sessions throughout the academic year that included a 1-hour lecture followed by small groups that included follow up discussion questions, case-based simulations, and review articles to reinforce key concepts learned. Additional educational material was provided for asynchronous learning. The course was assessed utilizing a voluntary, anonymous retrospective pre/post survey.

**Impact/Effectiveness:** The framework we present provides a model for which other programs in GME may implement DEI education. We present pre- and post-survey results from our pilot group highlighting the areas of growth in knowledge and understanding, as well as some of the