IMPRINT: A BLENDED-LEARNING ONLINE AND SIMULATION-BASED CURRICULUM TO PROMOTE INTERN WELLNESS AND INCREASE MEDICAL KNOWLEDGE DURING THE CB-1 YEAR

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Introduction: ImPRINT is a yearlong blended-learning online- and simulation-based course for current interns prior to matriculation into the Stanford Anesthesia residency program. By using a “flipping the classroom” structure (e.g. having interns do online “homework” before attending class) that combines online lectures, group discussion, and high fidelity simulation, ImPRINT's primary goal is to educate students on common clinical situations encountered during the CB-1 year. Furthermore, ImPRINT also promotes intern wellness and focuses on developing a growing relationship with the anesthesiology department.

Methods: 17 interns meet once a month for a yearlong course on clinical education and simulation. A learning management system (Moodle, Perth, Australia) is used to organize and deploy the curriculum. Students are assigned to watch a video podcast given by a faculty member or resident prior to each monthly in-person teaching session. Each in-person session begins with a pre-module assessment of medical knowledge and wellness that is taken on computers located in the teaching lab from the learning management system. This is followed by a 30-minute group discussion of module topic facilitated by faculty and senior resident facilitator or expert. Students then participate in a 45-minute immersive, high fidelity simulation of module topic, followed by part-task training for 30 minutes. The meeting closes with a 25-minute debriefing of all module activities and a post-module assessment survey of medical knowledge and wellness. The results shown in this abstract are a preliminary analysis of the pre- and post-module surveys of the ACLS curriculum component of this course, the module for which we currently have complete evaluation data.

Analysis Method: The data was analyzed with a mixed-method analysis. Open-ended collected data was entered into NVivo 10 and the questions were analyzed using qualitative methods. Answers to multiple-choice questions were analyzed using simple statistics. The surveys were deployed online using the Surveymonkey survey system.

Results: Students were asked to rank the following ACLS activities on a scale from 1 to 4,
with 1 being the most educationally beneficial and 4 being the least: podcast lecture, small group discussion, immersive high-fidelity simulation (mock code), and task training (mannekin practice, venipuncture, etc.) All students ranked immersive high-fidelity simulation as the most educational with an average score of 1.0, and with task training being the second-most educational activity with a score of 2.0. Students were then asked to rank the same activities on a similar scale that indicated which module was the most enjoyable. Again, immersive high-fidelity simulation and task-training ranked first and second most enjoyable with an average score of 1.11 and 1.78 respectively.

In addition, the pre-module survey found that while 69.2% of students felt “somewhat prepared” to be a contributing member of an adult code team, only 23.1% felt “prepared” and 0% felt “very prepared.”. The post-module survey found that 50% of students felt “prepared” and 21.4% of students felt “very prepared.”

**Conclusion:** ImPRINT, which is blended learning online course that uses high-fidelity simulation to educate students about common clinical scenarios encountered during internship. The unique blended-learning structure of the curriculum emphasizes high-fidelity simulation and part task trainer use during in-person teaching sessions. This is made possible through the shifting of didactic teaching components to an online podcast that is done prior to the in-person teaching sessions (i.e. “flipping the classroom”). Our learning management system provides a framework and structure to the course to ensure online components are completed prior to teaching sessions. By utilizing an innovative learning program blending online learning with simulation, ImPRINT provides CB-1 interns in the Stanford Anesthesia residency program with a unique hybrid approach to learning that leverages online content delivery of didactic lectures to enable time for high-fidelity simulation and part task training activities. Our preliminary results show that interns prefer simulation as an in-person learning module and prefer online learning prior to attending an educational session.