

52 Slack Intern Curriculum Supports Intern Preparedness and Bridges Curriculum Gaps due to COVID-19 Pandemic

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Learning Objectives: Assess the effectiveness of social media implementation of an Accreditation Council for Graduate Medical Education (ACGME) milestone-based curriculum during the spring 2020 US COVID-19 surge. The hypothesis is that pre-interns will report improvements in PP regarding multiple ACGME milestone topics.

Background: Transitioning to residency involves translation of academic knowledge into clinical acumen, and is complicated by variable medical school experiences. The COVID-19 pandemic presented a new challenge by displacing students from clinical rotations. Virtual educational modalities such as the Slack Intern Curriculum (SIC) have increased newly-matched “pre-intern” perceived preparedness (PP) for residency in prior years, but the SIC had never been implemented or evaluated in a pandemic with disrupted medical education.

Objective: Assess the effectiveness of social media implementation of an Accreditation Council for Graduate Medical Education (ACGME) milestone-based curriculum during the spring 2020 U.S. COVID-19 surge. The hypothesis is that pre-interns will report improvements in PP regarding multiple ACGME milestone topics.

Methods: The SIC was constructed using topics from 8 ACGME milestones in emergency medicine (EM), incorporated into 8 clinical scenarios. Residency recruitment occurred via national EM listservs; of 276 programs, 27 enrolled. Curricular implementation was on Slack workspaces. Cases included stimulus images and clinical questions. Ample discussion time, answers, and resources were provided. Trends in PP were calculated with descriptive statistics and the Wilcoxon Rank Sum test.

Results: Of 311 total pre-interns contacted, 289 (92.9%) completed a presurvey in April/May 2020, and 240 (77.2%) completed a post-survey in June/July 2020, for an 83.9% follow-through rate. Pre-interns reported statistically significant increases in PP both overall and regarding 14 of 21 milestones. See Table 1.

Conclusions: Amidst the educational disruption of the COVID-19 pandemic, pre-interns participating in the SIC reported statistically significant increases in PP. Limitations include absence of control or pre-pandemic data. Future directions include adapting the SIC to other specialties’ ACGME milestones for generalizability across all fields.

Table 1. Wilcoxon Rank Sum Test summary data on perceived preparedness of United States emergency medicine-bound pre-interns. Pre-curriculum surveys were completed in April/May of 2020, and post-curriculum were completed in June/July 2020.

Milestone	Level	Pre-Survey		Post-Survey		Comparison	
		Med	Mean (SD)	Med	Mean (SD)	95% CI ^a	P value ^b
Emergency Stabilization	Recognizing Abnormal Vitals	4	4.343 (0.695)	4	4.271 (0.736)	(-0.1948, 0.0514)	.28
	Recognizing an Unstable Patient	4	3.948 (0.787)	4	4.071 (0.659)	(-0.0007, 0.2462)	.13
Diagnosis	Forming a Diagnostic Plan	4	3.516 (0.838)	4	3.679 (0.738)	(0.0289, 0.2983)	.03
	Forming a Differential Diagnosis	4	3.574 (0.851)	4	3.708 (0.807)	(-0.0080, 0.2759)	.07
Diagnostic Studies	Identifying Need for Diagnostic Tests	4	3.433 (0.797)	4	3.562 (0.757)	(-0.0031, 0.2630)	.07
	Identifying the Appropriate Tests	4	3.412 (0.799)	4	3.525 (0.781)	(-0.0222, 0.2487)	.09
	Interpreting Test Results	4	3.343 (0.915)	4	3.45 (0.832)	(-0.0419, 0.2568)	.32
Pharmacotherapy	Recognizing Pharmacology of Medications	3	3.059 (1.007)	3	3.142 (0.917)	(-0.0817, 0.2474)	.30
	Selecting Appropriate Medications	3	2.865 (0.935)	3	3.108 (0.904)	(0.0858, 0.4008)	.002
Disposition	Recognizing need for Additional Resources	3	3.215 (0.966)	4	3.408 (0.919)	(0.0324, 0.3552)	.01
	Recognizing need for Admission to Hospital	3	3.118 (0.878)	4	3.425 (0.845)	(0.1598, 0.4549)	<.001
	Recognizing Appropriate Level of Care for Admission	3	2.837 (0.892)	3	3.267 (0.944)	(0.2713, 0.5873)	<.001
General Approach to Procedures	Recognizing Relevant Anatomy for a Procedure	3	2.983 (1.029)	3	3.179 (0.979)	(0.0245, 0.3684)	.02
	Identifying Indications/Contraindications for Procedures	3	2.879 (0.970)	3	3.167 (0.967)	(0.1217, 0.4539)	<.001
	Identifying Appropriate Equipment for Procedures	3	2.668 (0.979)	3	3.062 (0.960)	(0.2285, 0.5608)	<.001
Airway Management	Identifying Pharmacology of RSI Medications	3	2.664 (0.997)	3	3.150 (1.003)	(0.3140, 0.6573)	<.001
	Confirming Endotracheal Tube Placement	4	3.502 (1.004)	4	3.867 (0.828)	(0.2085, 0.5214)	<.001
	Recognizing Upper Airway Anatomy	3	3.076 (1.068)	3	3.283 (0.999)	(0.0303, 0.3841)	.03
Other Diagnostic and Therapeutic Procedures	Recognizing Indications for Ultrasound	4	3.519 (0.902)	4	3.804 (0.807)	(0.1391, 0.4312)	<.001
	Optimizing US Images	3	2.661 (1.165)	3	2.950 (1.108)	(0.0945, 0.4837)	.003
	Interpreting US Images	3	2.799 (1.087)	3	3.154 (1.001)	(0.1763, 0.5334)	<.001
Overall Perceived Preparedness for Residency		3	3.107 (0.861)	3	3.350 (0.835)	(0.0974, 0.3881)	<.001

^aConfidence interval values reflect shift in location centered around changes in the mean.

^bBold type indicates statistical significance

MED, median; SD, standard deviation; CI, confidence interval; RSI rapid sequence intubation; US, ultrasound.