Least Squares Means for effect attempt
Pr > |t| for H0: LSMean(i)=LSMean(j)
Dependent Variable: time

i/j	1	2	3	4	5	6	7	8	9	10	11	12
1		0.6685	0.0002	0.0003	<.0001	<.0001	<.0001	<.0001	<.0001	0.0005	0.0175	0.3909
2	0.6685		0.2195	0.2022	0.0149	<.0001	<.0001	0.0003	0.0009	0.0229	0.1722	0.7181
3	0.0002	0.2195		1.0000	0.9961	0.3936	0.3768	0.5158	0.5776	0.6401	0.8797	0.9813
4	0.0003	0.2022	1.0000		0.9989	0.5093	0.4914	0.6256	0.6763	0.6988	0.9047	0.9849
5	<.0001	0.0149	0.9961	0.9989		0.9711	0.9670	0.9856	0.9874	0.9539	0.9907	0.9980
6	<.0001	<.0001	0.3936	0.5093	0.9711		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
7	<.0001	<.0001	0.3768	0.4914	0.9670	1.0000		1.0000	1.0000	1.0000	1.0000	1.0000
8	<.0001	0.0003	0.5158	0.6256	0.9856	1.0000	1.0000		1.0000	1.0000	1.0000	1.0000
9	<.0001	0.0009	0.5776	0.6763	0.9874	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000
10	0.0005	0.0229	0.6401	0.6988	0.9539	1.0000	1.0000	1.0000	1.0000		1.0000	1.0000
11	0.0175	0.1722	0.8797	0.9047	0.9907	1.0000	1.0000	1.0000	1.0000	1.0000		1.0000
12	0.3909	0.7181	0.9813	0.9849	0.9980	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	

Image 2.

The 2020 first-year resident group had a faster mean time to completion on first attempt than the 2021 second-year resident group, but the rate of improvement was significantly fast for the second-year group (p=0.24).

Conclusion: Additional repetition beyond the ACGME-endorsed three cricothyrotomy attempts may help increase proficiency. Periodic retraining may be important to maintain skills.

Innovation Abstracts

1 A Novel Pediatric Resuscitation Simulation and Procedures Curriculum for Emergency Medicine Residents

Catherine Yu, April Choi, Kei U. Wong

Introduction: Pediatric resuscitation is a vital skill in emergency medicine (EM). However, EM residents have varied exposure to pediatric critical care, and not all graduating residents reach competence in pediatric resuscitation and procedures. A limited number of curricula on these topics have been described in literature, and more are needed to accommodate the diverse characteristics of resident learners. We present a new pediatric airway and resuscitation curriculum for EM residents. Educational

Objectives: By the end of the curriculum, learners will be able to perform pediatric intubation, jet ventilation, and neonatal warmer set-up on a simulated model. There will be an increase in perceived preparedness and comfort in managing neonatal shock and pediatric respiratory distress.

Curricular Design: Based on an internal needs assessment which identified gaps in pediatric critical care education, we developed a four-hour resident workshop using flipped classroom and simulation instructional methods. Flipped classrooms paired with case-based discussions promote active higher-order learning ideal for complex subjects. Simulation allows for experiential learning of high stakes topics in a safe environment. We began with two pediatric case-based small group discussions. Residents then rotated through two resuscitation simulations and skill stations for pediatric jet ventilation, intubation, and neonatal warmer set-up. We surveyed the residents to evaluate the impact of the curriculum on preparedness and comfort in resuscitation and procedural skills.

Impact: Among 18 residents, there was significant improvement in perceived preparedness and comfort in managing pediatric resuscitations and performing airway procedures (p<0.0005). We continue to improve this program based on resident feedback. With varied training and exposure to pediatric critical care in EM, this curriculum offers residency educators a new resource to teach resuscitation and procedural skills.

RUTGERS
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DEPARTMENT OF EMERGENCY MEDICINE

Pediatric Resuscitation Simulation and Procedure Workshop

Time	Activity	Description
8-9:30am	Case Discussion	Two case-based small group discussions using a flipped classroom instructional method. First and second year residents discussed neonatal jaundice and brief resolved unexplained events. Third and fourth year residents discussed status epilepticus and congenital heart disease. Each class discussion was led by pediatric emergency medicine faculty.
9:35-9:40am		Review educational objectives and logistics
9:40-10:20am 15min case 25min debrief	Simulation A	A case of neonatal shock led by pediatric emergency medicine faculty. Learners were expected to recognize, assess, and stabilize a 7-day old neonate who presents lethargic, hypoxic, and hypotensive. Learners were expected to utilize and apply crisis resource management as well as teamwork and communication skills.
10:25-11:05am 15min case 25min debrief	Simulation B	A case of pediatric respiratory distress due to bronchiolitis led by emergency medicine faculty. Learners were expected to recognize, assess, and stabilize a 6 month old patient who presents in respiratory distress. Learners were expected to utilize and apply crisis resource management as well as teamwork and communication skills.
11:10-11:55am 15min per station	Mini Stations	Each station led by pediatric emergency medicine faculty. Station 1) Newborn warmer set-up Learners reviewed the components and logistics of a newborn warmer. Learners reviewed the "Golden Minute" of neonatal resuscitation. Learners practiced the first steps of neonatal resuscitation on a simulated model with the newborn warmer. Station 2) Pediatric intubation Learners reviewed the anatomic and physiologic challenges in managing the pediatric airway. Learners reviewed laryngoscope types/sizes and endotracheal tube sizes. Learners practiced endotracheal intubation with direct laryngoscopy on simulated models. Station 3) Percutaneous transtracheal jet ventilation Learners reviewed indications and contraindications. Learners reviewed the technique and set-up for performing the procedure. Learners practiced the procedure on simulated models.
11:55-12pm		Wrap-Up

Figure.

2 Mission-Driven Individual Learning Plans: A Recipe for Resident Growth

Matthew Stull, Zeinab Shafie-Khorassani, Marie Hoyle

Background: In working towards competency-based education, the ACGME now expects residency programs to utilize individualized learning plans (ILP) for all residents. While used in remediation, best practices when using ILP's more broadly has not been defined. In addition, the ACGME expects residencies to have mission statements that articulate the unique value it brings to learners. There is an opportunity to align a program's mission with the ILP. Our program developed an ILP and coaching program with prompts that anchor the residents' reflections on their progress through residency to the program's unique mission.

Objectives: The innovation's objectives include: 1) Develop residents' reflection on their clinical abilities with a growth orientation. 2) Align residents' growth and progression