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Traditional Bedside Versus Digital Point-of-Care Ultrasound Education

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and “moderately easy” (20%) to arrange PCC rotations. Regions finding it “moderately difficult” were NE (26%) and MW (24%). ACA and COM programs had no difference in obtaining PCC rotations, however, COM programs scheduled PICU rotations at AFF and non-AFF centers (73%) compared to ACA with PICU at their primary institute. (61%) ($p < 0.001$). Rotations in NICU (21%), PSICU (13%) and PNeuroICU (1%) were less common. Accessibility noted if ICU was outside the primary institute, 42% COM programs reported difficult and 35% by ACA programs ($p=NS$).

Conclusion: A PCC unit in the Primary or AFF hospital is the most achievable option. Overall, EM programs reported no deficit in fulfilling the PCC rotation. Reexamination is needed as more hospitals consolidate with specific PED Tertiary centers available only to their own rotators.

58 Thriving in Emergency Medicine Residency

Kevin Hanley, Jillian Mongelluzzo

Background: It has been shown that the burnout rate for emergency medicine providers is among the highest seen in healthcare. While resilience and grit have been studied as protective against burnout, the ability to thrive may be a more useful target. Thriving has previously been defined as a combination of vitality—having energy available and feeling “alive”—and learning—acquiring and applying valuable knowledge. Thriving has been found to be dependent on several categories, one of which is unit contextual features (UCFs). UCFs are factors such as challenge or hindrance stressors, autonomy, and trust.

Objectives: This study is being done to determine if Emergency Medicine residents are thriving, and what UCFs are contributing to their ability or inability to thrive during residency.

Methods: We administered a mixed-methods survey developed from previously validated surveys regarding the UCFs and overall thriving to emergency medicine residents at one four-year emergency medicine residency training program in March of 2022.

Results: We received 38 responses (out of 58 residents) with 8-11 respondents per PGY level. Overall thriving score for all residents was 3.2/5. First-year residents had a score of 3.5/5 while 2nd-4th years each had a score of 3.1/5. Social support was the UCF that most contributed to thriving while hindrance stressors, challenge stressors, and autonomy negatively affected the residents’ thriving.

Conclusions: We found ideal targets for interventions from the survey, with qualitative responses that can help guide those interventions to increase thriving. Other residencies could similarly use this survey to identify targets

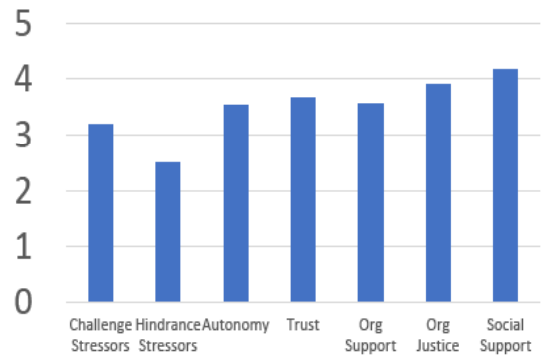


Figure. Unit contextual features.

Table.

Unit Contextual Feature	Sample of Responses		
Hindrance Stressors	Feeling like I'm working in a broken system, feeling like patients are rotating through without making much of a difference for any of them	Boarding, difficulties in connecting people to follow up, decrease in number of available social services (particularly shelter beds) during COVID	Lack of care or support for unhoused patients and people suffering from addiction because this represents a huge portion of our patients that I feel like I can barely help
Autonomy	I have had fantastic Attendings that let me make all of my decisions, which allows me to learn the most. I have had other Attendings that have basically treated me like a scribe; they have seen my very stable patients before me and ordered their own labs/imaging before I can even present them.	Attendings (and trauma surgeons) sometimes immediately take over (sometimes rightfully so), but often we learn best by having to talk through the decisions instead of having someone run the code behind your back	
Social Support (positive effect on thriving)	attendings that advocate for your learning, but also sympathize with the amount of shifts you work per month (ie empathy towards your situation)	The times when I can truly feel that I have learned and grown, times when I have brought people joy or made their day better	community, being able to share with others that I'm not thriving or that I am, hearing about the experiences of others, the idea that One day I'll be working less and will be able to have a more balanced life.

for intervention. Responses highlighted hindrance stressors present in the ED that would be ideal targets for intervention, while targeting social support may not have as much of an impact. The study was limited due to administration once during the year as time during the academic year may affect the level of thriving.

59 Traditional Bedside Versus Digital Point-of-Care Ultrasound Education

Michael Sobin, Steven Johnson, Amit Bahl

Background: While standard point-of-care ultrasound

(POCUS) instruction heavily relies on resource intense bedside teaching, it is unknown whether a more flexible digital curriculum may be a viable alternative.

Objective: We aim to assess differences in trainee confidence performing less frequently encountered POCUS applications after reviewing an onsite traditional bedside instruction, remote lecture slides with written narrative or video narration.

Methods: This was an anonymous, close ended, 15 question survey study completed by emergency medicine residents and faculty at a single tertiary care teaching hospital. The survey was adapted from a validated ultrasound education study. Educational material focused on uncommon POCUS exams (scrotal, bowel, ocular). Participants were randomized to one of three training methods: onsite traditional bedside teaching, remote lecture slides with written narrative or video narration. All slides and scripts were identical. Participants rated their confidence performing and interpreting each exam type on a five-point Likert scale before and six months after the education intervention.

Results: 14 participants (five post-graduate year (PGY)1s, three PGY2s, three PGY3s and three faculty members) responded to the survey. All three education

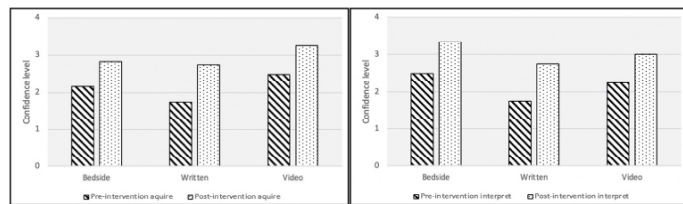


Figure 1. Level of improved confidence acquiring and interpreting POCUS scans after education intervention.

groups expressed improved confidence when acquiring and interpreting scrotal, ocular and bowel POCUS images (Figure 1). Over 75% of participants per module were likely or very likely to recommend the curriculum, with 100% being satisfied or very satisfied with their assigned module.

Conclusions: Participants had increased confidence acquiring and interpreting uncommon POCUS images after participating in bedside and distance-based education modules. Future objective assessments of traditional bedside vs remote digital POCUS curricula will need to be completed to identify if similar learning outcomes can be achieved through less resource intensive virtual methods.

60 Trends in Point-of-Care Ultrasound Use among Emergency Medicine Residency Programs Over a 10-Year Period

Michael Gottlieb, Robert Cooney, Andrew King, Alexandra Mannix, Sara Krzyzaniak, Jaime Jordan, Eric Shappell, Megan Fix

Background: Point-of-care ultrasound (POCUS) is increasingly utilized in emergency medicine (EM). While residents are required by ACGME to complete a minimum of 150 exams before graduation, the distribution of exam types is not well-described. Moreover, as the field of POCUS has advanced, the impact on resident exams performed has not been reported.

Objectives: This study sought to assess the number of POCUS exams completed during EM residency training and evaluate trends over time.

Methods: This was a retrospective review of POCUS exams across 5 ACGME accredited residency programs over the last 10 years (2013-2022). Sites were selected to ensure diversity of program length, program type, and geography. Data from EM residents graduating in 2013-2022 were eligible for inclusion. Data from residents from combined training programs, those who did not complete their full training at that institution (i.e., transferred in/out), or did not have data available were excluded. We determined the list of exam types via the ACEP guidelines for POCUS. Each site obtained POCUS exam totals for each resident upon graduation. We calculated the mean and 95% CI for each procedure.

Results: We collected data from a total of 535 residents, with 524 (97.9%) meeting inclusion criteria. The mean number of POCUS exams increased from 277 in 2013 to 407 in 2022 (Table). Focused assessment with sonography in trauma (FAST), cardiac, obstetric/gynecologic, and renal/bladder were performed most frequently. Ocular, skin/soft tissue, and thoracic POCUS had the largest increase in

Table. Distribution of ultrasound numbers by graduation year.

Year of Graduation	Acute Care EM CP	Emergency CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	EM CP	TOTAL
2013	28 (0-27)	8 (0-5)	25 (12-39)	38 (28-49)	9 (3-15)	67 (37-95)	7 (4-10)	41 (28-53)	4 (0-8)	25 (20-30)	11 (7-16)	0 (0-0)	12 (7-18)	277 (228-326)					
2014	19 (12-28)	8 (0-5)	22 (17-27)	31 (24-37)	11 (7-16)	69 (53-79)	9 (3-15)	39 (27-49)	7 (4-10)	28 (23-33)	11 (7-16)	0 (0-0)	11 (7-15)	243 (201-285)					
2015	28 (20-37)	2 (0-5)	26 (20-32)	47 (38-55)	15 (10-20)	88 (80-92)	10 (7-14)	39 (28-49)	7 (4-10)	31 (26-37)	13 (8-18)	0 (0-0)	22 (17-28)	352 (320-384)					
2016	28 (20-38)	1 (0-1)	23 (18-28)	38 (30-46)	13 (8-18)	77 (64-87)	10 (7-14)	39 (28-49)	18 (12-24)	29 (23-35)	14 (8-20)	1 (0-1)	24 (18-30)	353 (320-386)					
2017	19 (12-28)	1 (0-1)	21 (16-27)	40 (32-48)	11 (7-16)	54 (44-62)	9 (3-15)	38 (28-49)	7 (4-10)	27 (22-32)	12 (8-16)	0 (0-0)	13 (8-18)	277 (228-326)					
2018	11 (7-15)	2 (0-5)	26 (21-31)	30 (23-37)	22 (15-29)	70 (57-82)	9 (3-15)	39 (28-49)	11 (7-14)	29 (23-35)	26 (17-34)	1 (0-1)	27 (20-34)	341 (302-380)					
2019	20 (14-26)	1 (0-1)	22 (17-27)	128 (104-149)	19 (13-25)	129 (111-147)	25 (18-32)	38 (28-49)	17 (11-23)	41 (34-47)	31 (24-37)	1 (0-1)	22 (16-28)	493 (459-527)					
2020	20 (14-26)	2 (0-5)	28 (22-34)	31 (24-38)	16 (11-21)	77 (64-87)	11 (7-16)	38 (28-49)	22 (16-28)	32 (26-38)	26 (19-32)	0 (0-0)	16 (12-20)	376 (325-427)					
2021	20 (14-26)	2 (0-5)	29 (23-35)	77 (69-87)	19 (14-24)	81 (70-88)	12 (8-16)	36 (26-46)	13 (8-18)	31 (25-37)	22 (15-29)	0 (0-0)	19 (14-24)	393 (355-431)					
2022	28 (20-37)	2 (0-5)	29 (23-35)	19 (14-24)	28 (17-38)	79 (62-84)	17 (11-23)	41 (32-49)	13 (8-18)	31 (25-37)	22 (15-29)	0 (0-0)	18 (13-23)	407 (374-440)					
TOTAL	39 (29-49)	1 (0-1)	27 (22-32)	47 (40-55)	18 (14-21)	74 (70-78)	13 (8-18)	77 (64-87)	11 (7-14)	24 (19-29)	23 (18-28)	0 (0-0)	18 (13-23)	349 (314-384)					