

## **UC Irvine**

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### **Title**

Point of Care Ultrasound Use Following Ultrasound Simulation In Emergency Medicine Conference

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from 1-7 (1 is a strong disagreement and 7 is a strong agreement).

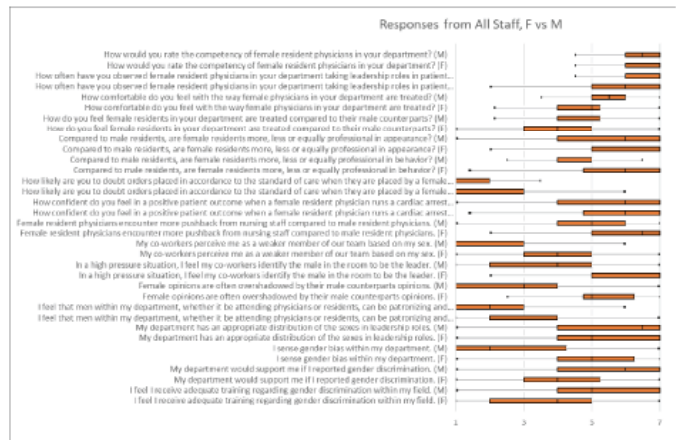
**Results:** were tabulated with counts, medians, IQRs, Mann Whitney U testing. Results Data from 48 participants, 50% identified as each gender and 56.3% are residents. The following questions were statistically significant in difference (p values 0.05-0.00007). Females were perceived more professional in behavior than men, men within the department can be patronizing to females (p=.001) and females opinions are overshadowed by males (p=.0009). Females felt co-workers perceived them as weaker members (p=.003) and males were seen as the leader in high stress situations (p=.00007). Females reported confidence was affected by how peers perceived them (p=.007), more gender bias (p=.001) and pushback from nursing (p=.003).

**Conclusions:** Despite the emphasis on creating an inclusive environment, providers in emergency medicine still hold mixed perceptions of female emergency medicine physicians and data suggests female gender bias is present and may be a potential threat to female education. Further research is instrumental to determine steps necessary to create an equitable learning environment.

**Table 1.** All staff, female versus male.

Question	Female	Male	p Value
How would you rate the competency of female resident physicians in your department?	7 (6-7)	6.5 (6-7)	0.773
Female resident physicians in my department demonstrate the same level of medical expertise as their male counterparts	7 (7-7)	7 (7-7)	0.103
How often have you observed female resident physicians in your department taking leadership roles in patient care situations?	6 (5-7)	6 (6-7)	0.446
How comfortable do you feel with the way female physicians in your department are treated?	5 (4-5.25)	5.5 (4-6)	0.073
How do you feel female residents in your department are treated compared to their male counterparts?	4 (3-5)	4 (4-5.25)	0.194
Compared to male residents, are female residents more, less or equally professional in appearance?	7 (5-7)	6 (4-7)	0.741
Compared to male residents, are female residents more, less or equally professional in behavior?	6 (4.75-7)	4 (4-5)	0.005
How likely are you to doubt orders placed in accordance to the standard of care when they are placed by a female resident physician vs. a male resident physician?	1 (1-3)	1 (1-2)	0.68
How confident do you feel in a positive patient outcome when a female resident physician runs a cardiac arrest resuscitation compared to a male resident physician?	6 (4.75-7)	6 (4-7)	0.398
Female resident physicians encounter more pushback from nursing staff compared to male resident physicians.	6.5 (5-7)	5 (4-6)	0.004
My co-workers perceive me as a weaker member of our team based on my sex.	4 (3-5)	1 (1-3)	0
In a high pressure situation, I feel my co-workers identify the male in the room to be the leader.	7 (5-7)	4 (2-5)	0
Female opinions are often overshadowed by their male counterparts opinions.	5 (4.75-6.25)	3 (1-4)	0
I feel that men within my department, whether it be attending physicians or residents, can be patronizing and condescending to the female members of the team.	4 (2-4)	7 (1-3)	0.001
My department has an appropriate distribution of the sexes in leadership roles.	5 (4-7)	6.5 (4-7)	0.127
I sense gender bias within my department.	5 (4-6.25)	7 (4-7.25)	0.001
My department would support me if I reported gender discrimination.	4 (3-5.25)	6 (4-7)	0.007
I feel I receive adequate training regarding gender discrimination within my field.	4 (2-5)	5 (4-7)	0.007

**Table 2.** Responses from all staff female versus male.



## 72 Point of Care Ultrasound Use Following Ultrasound Simulation In Emergency Medicine Conference

Travis Masood, Danielle Biggs, Mary Rometti, Jeffrey Greco, Greg Neyman, Hrant Gevorgian

**Background:** Point of care ultrasound (POCUS) is crucial in caring for Emergency Department (ED) patients. Limited studies exist that demonstrate its application in simulation (SIM) labs and impact on enhancing clinical skills. A well-structured POCUS curriculum leads to clinical proficiency, but the process of achieving competency remains uncertain. SIM has enabled learners to refine critical skills while simultaneously reducing risks and enhancing patient safety.

**Objective:** To determine if providing education on POCUS skills during EM Resident Conference SIM days results in more POCUS exams being performed in the ED.

**Methods:** During EM resident conference, SIM stations reviewed a POCUS exam. The number and type of scans performed in the ED during the 3 weeks following the SIM review were compared with the 3 weeks prior. Inclusion criteria involved completing a study worksheet on the Butterfly Enterprise platform. Incomplete worksheets were excluded. Sample size justification was based on a targeted 10% increase in studies of interest. Data was collected from Butterfly with further analysis conducted post-collection.

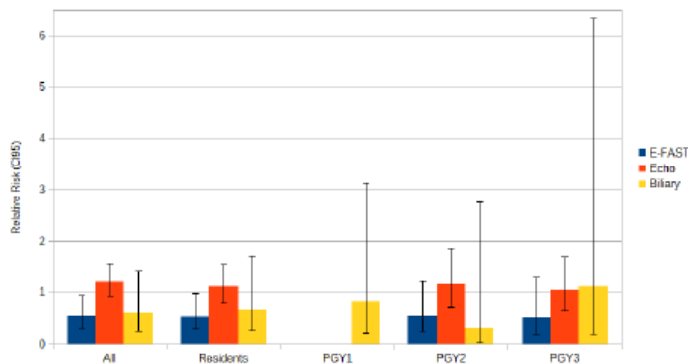
**Results:** During the study period, 1831 exams were performed. 931 studies were logged in the pre period, and 900 in the post. Pre/post exam types included eFAST 38/18; ECHO 62/105; Biliary 16/7. 11% were performed by PGY1s, 35% by PGY2s, 20% by PGY3s, and the remainder by attendings. Table 1 shows the number of exams performed by level, pre/post SIM session, relative risk, confidence intervals, and p values. Figure 1 shows the difference in the post and

pre period as relative risk.

**Conclusions:** While there was not a statistically significant increase in the total number of POCUS scans, the study prompts additional research questions and alternative ways to measure a successful intervention. Further research could evaluate the quality of POCUS scans performed or confidence of the sonographer before and after the SIM.

**Table 1.**

Period	Percent of Studies			Count of All US		
	eFast	Echo	Biliary	eFast	Echo	Biliary
	All					
Pre	11%	25%	5%	339	251	341
Post	6%	30%	3%	294	352	254
	PGY1					
Pre	0%	0%	8%	0	2	71
Post	0%	34%	7%	1	76	43
	PGY2					
Pre	14%	29%	4%	148	56	111
Post	7%	33%	1%	96	133	88
	PGY3					
Pre	16%	35%	5%	76	46	60
Post	8%	36%	6%	74	77	36



**Figure 1.** Change in US rate by type, level.

**Innovation Abstracts**

**1 Assessing the Inconsolable Infant: Look Everywhere!**

*Damian Lai, Julianne Blomberg, Jeremiah Ojha, Kristen Oliff, Brent Becker*

**Introduction:** A crying infant is a common presentation in the Emergency Department. Resident physicians in the early stages of training express discomfort when dealing

with pediatric patients, due in part to the inability of infants to relay their own history. We designed a simulation emphasizing the importance of a comprehensive head-to-toe physical exam and maintaining a broad differential in assessing inconsolable infants.

**Objectives:** Identify non-obvious causes of inconsolable crying by performing a complete and thorough infant physical exam.

**Curricular Design:** Residents from a 3-year emergency medicine residency program participated in a simulation activity involving three infant task trainers with various causes of inconsolable crying. The simulated patients had the same baseline presentation: 8-month-old child, born at 40 weeks with an uncomplicated birth history presenting with normal vitals and inconsolable crying starting 2 hours prior. Participants were tasked with using a history and physical examination to identify pathology including a hard palate burn from hot milk, recent vaccination, eyelid foreign body, buccal stomatitis, rectal fissure, corneal abrasion, cellulitis, diaper dermatitis, hair tourniquet, and nasal foreign body. We recorded the time required by each participant to identify all 10 causes.

**Impact:** Participants, especially interns, valued the emphasis on a thorough infant physical exam and appeared to gain the most from the activity. Junior residents tended to search for higher acuity cardiopulmonary causes. We observed that senior residents were more organized, resulting in more efficient completion of the activity. Notably, the identification of eye pathology took the most time to diagnose. This activity also facilitated discussions on exam findings relevant to non-accidental trauma. We plan to integrate this activity into our new intern boot camp sessions.

**2 FoEM Clerkship: An Open-Access Case-Based Flipped Classroom Curriculum for Emergency Medicine Clerkships**

*Max Berger, Stephen Villa, Steven Lindsey, Howard Choi, Megan Henn, Kristen Grabow Moore*

**Background:** Over 75% of EM residency programs use Foundations of Emergency Medicine’s (FoEM) free, open-access, learner-centric, level-specific curricula to teach EM core content to residents. In a 2022 survey of FoEM users, 59% of participating programs reported use of Foundations I (PGY-1 course) to teach students, and 54% confirmed interest in a specific FoEM Clerkship course. With an increasing number of schools requiring EM clerkships and demonstrated interest, we built FoEM Clerkship to support level-specific didactics for EM clerkship students.

**Educational Objectives:** Course objectives include 1) identify “can’t-miss” differential diagnoses for common ED presentations; 2) build a framework for determining “sick”