



Implementing a structured hybrid teaching model for Gastroenterology POCUS significantly increased interest, understanding, and confidence in fundamental gastroenterology ultrasound principles and their application among residents



SonoSim®online modules

Gastroenterology POCUS: A Deeper Look

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Introduction

- Gastroenterology (GI) Point-of-Care-Ultrasound (POCUS) is a valuable bedside tool that has been shown to provide better-quality patient care.
- Objective - Implementation and exploration of the impact of a hybrid teaching model on the following domains: Interest, Understanding and Confidence

Methods

- Teaching model: SonoSim® modules and in-person training
- Population: Internal Medicine and Medicine/Pediatrics residents
- Survey:
 - Anonymous Likert-type scale responses
 - Filled before and after the hands-on training session
 - Score range: Interest -2 to +2, Understanding -4 to +4, Confidence -14 to +14
- Statistical methods:
 - Direct comparison: Fisher’s exact and t-test.
 - Odds ratio: comparing % of residents with net positive score
 - Subgroup analysis: Post-graduate year (PGY) and previous US experience

Results

- 23 and 24 residents completed the pre-and post-training anonymous surveys, respectively
- Previous US experience: positive skew
- Estimated impact (odds ratio) of training on each domain (table)
- Significant increase in the interest, understanding and confidence domains between pre- and post- training survey among residents
- No differences regarding PGY level subgroup among the interest domain

Conclusion

- Implementation of a GI POCUS hybrid teaching model results in increased interest, understanding and confidence in its use among residents. Confidence most significant among PGY 2 residents.
- Future studies: Assessing the potential impact GI POCUS may have on residency training by utilizing a comprehensive teaching curriculum and more objective assessment tools.

DOMAIN	Net Confidence Score > 0		p-value	Odds Ratio (95% CI)
	Pre-training	Post-training		
Total N	23	24		
Interest - n (%)	13 (56.5)	23 (95.8)	<0.05	17.7 (2.0 – 154.2)
Understanding - n (%)	11 (47.8)	24 (100)	<0.001	NA
Confidence - n (%)	10 (43.4)	20 (83.3)	<0.05	6.5 (1.7 – 25.7)

SUB-GROUP ANALYSIS: SCORES ON POST-TRAINING SURVEY

	PGY Level			Previous ultrasound experience*	
	PGY 1*	PGY 2*	PGY 3	Yes	No
Mean Interest scores (SD)	1.30 (0.48)	1.08 (0.51)	1.00 (NA)	1.00 (0.47)	1.33 (0.52)
Mean Understanding scores (SD)	2.50 (0.85)	2.33 (0.78)	3.00 (NA)	2.30 (0.67)	2.33 (0.82)
Mean Confidence scores (SD)	4.80 (5.18)	5.42 (4.89)	6.00 (NA)	4.20 (3.16)	5.00 (5.29)

*No statistical difference in previous ultrasound experience and PGY 1 vs PGY 2 for mean post-training scores on any domain