

Developing a Procedural Competency-based Assessment Tool for Internal Medicine Residents

PRESENTER:

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BACKGROUND

- Evaluating procedural competency of internal medicine residents is critical to medical training and patient safety.
- Current training is highly variable and lacks a standardized competency assessment.
- A modern framework for effective, durable procedural training is “Learn, See, Practice, Prove, Do, and Maintain” (LSPPDM).

METHODS

1. Collected previously published checklists and guideline-based practices as well as trainee responses after completing simulation-based procedure curriculum.
2. Made standardized procedural checklists and teaching materials for thoracentesis, paracentesis, & central line insertion.
3. Created a digital competency assessment tool (CAT) for simulation and clinical settings.
4. Incorporated the CAT into a comprehensive, procedural curriculum that satisfies all elements LSPPDM model.

Digital Competency Assessment Tool

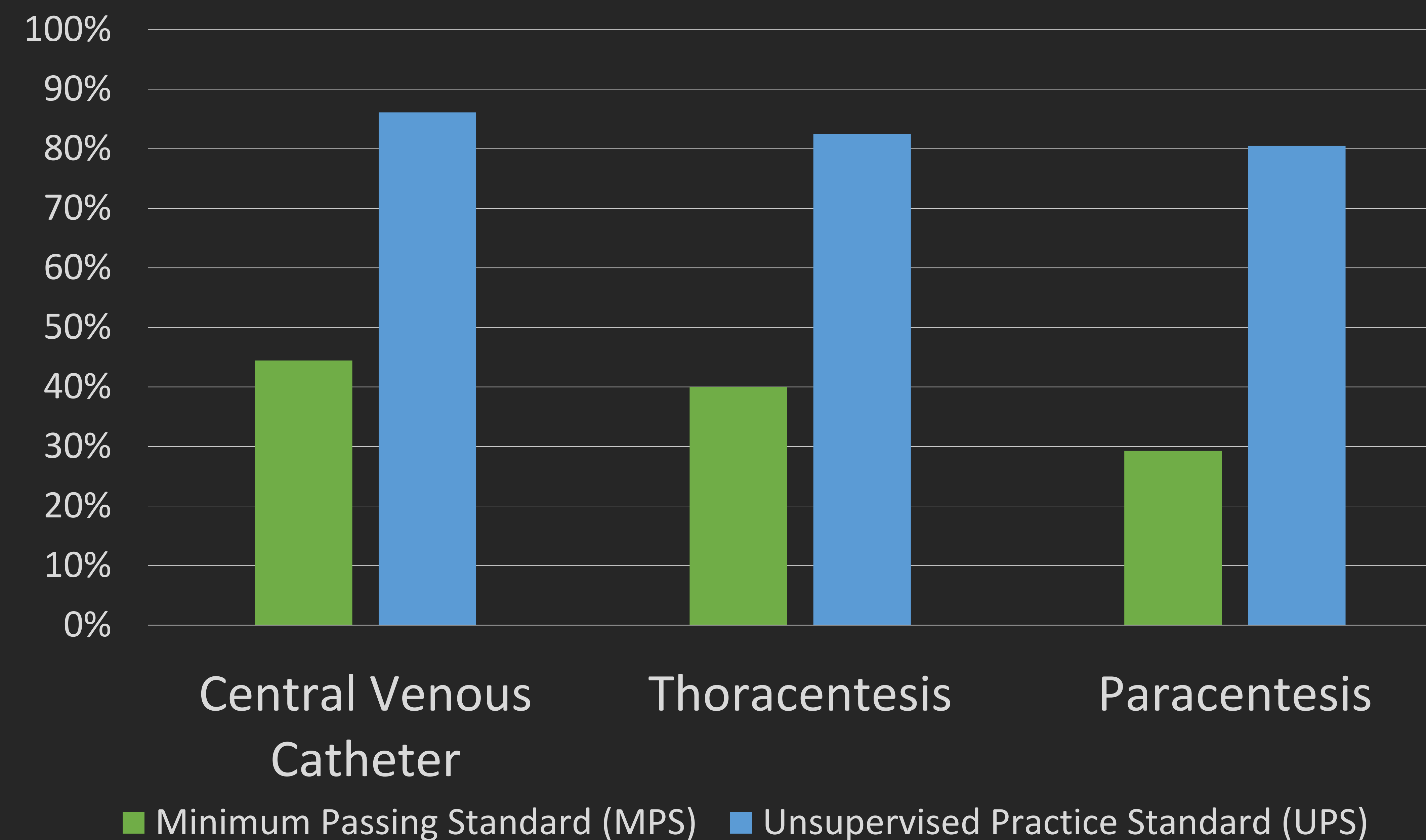


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Using a novel approach, resident procedural competency can be assessed on an individual level.

Percentage of Procedural Checklist Performed Correctly to Meet Each Standard

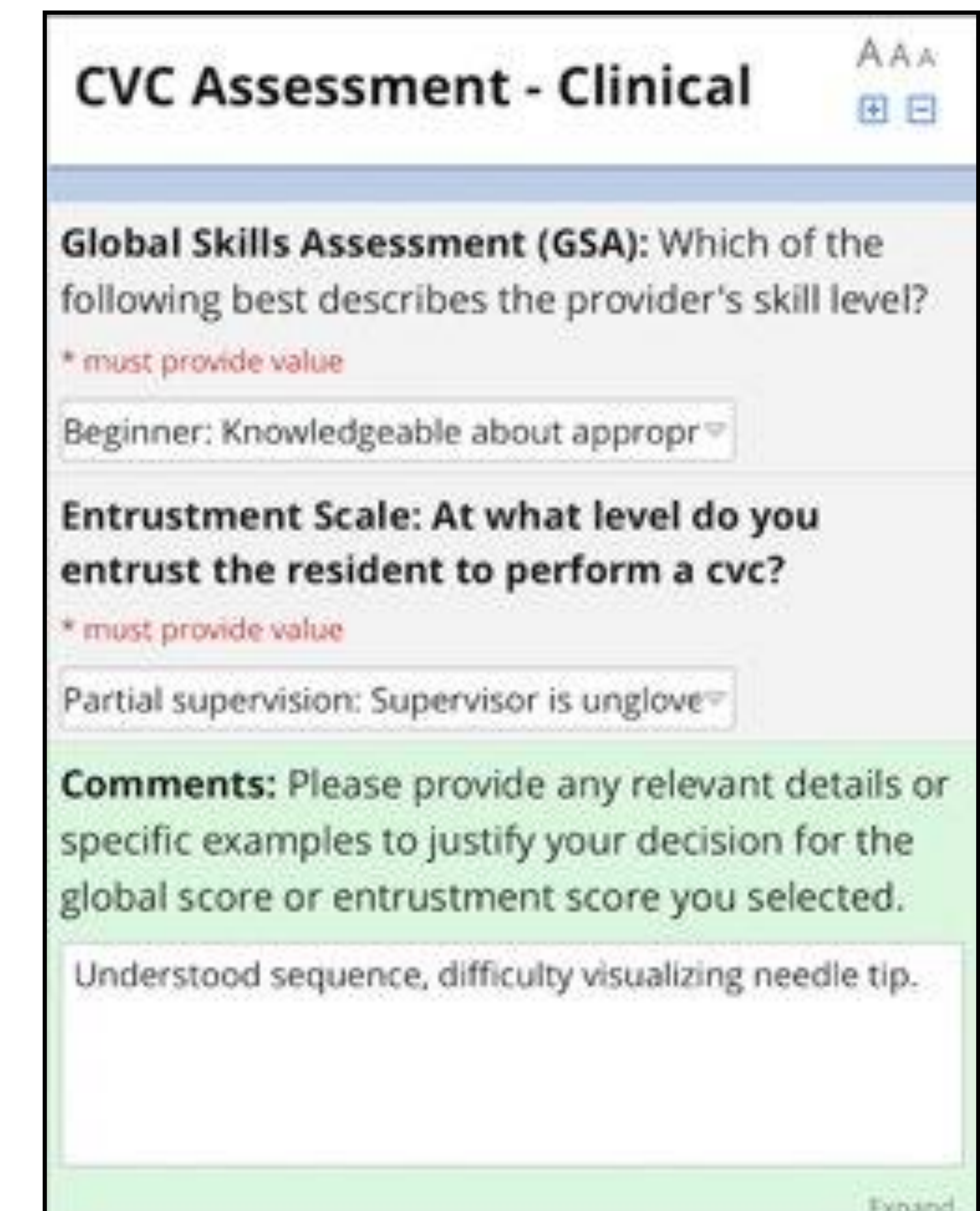


Angoff Standard-Setting: 27 national experts provided Angoff cutoffs for central venous catheter placement, thoracentesis, and paracentesis.

- Central venous catheter: MPS 20/36 errors (SD 8.0); UPS 5/36 errors (SD 8.4).
- Thoracentesis: MPS 24/40 errors (SD 6.8); UPS 7/40 errors (SD 7.7).
- Paracentesis: MPS 29/41 errors (SD 7.3); UPS 8/41 errors (SD 7.5).

CONCLUSIONS

- We created evidence-based educational resources, free and publicly available at TeachIM.org.
- A Rotation-Paired Simulation Based Mastery Learning curriculum is feasible and cost effective.
- A digital CAT is an elegant tool for education and assessment of trainees.



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