



Integration of a Point-of-Care Ultrasound (POCUS) Curriculum into an Anesthesia Residency Program

Charlotte Streetzel MD¹, Andrew S. Braun MD¹, Jacelyn E. Peabody Lever PhD MS⁴¹, Susan Black MD¹, Tekuila Carter MD¹, Lee Ann Riesenbergh PhD RN¹, Promil Kukreja MD PhD¹



Abstract

- We have formulated a POCUS curriculum for anesthesiology residents focused on repetition, hands-on learning, and longitudinal benchmarks

Introduction

- The use of POCUS for diagnosis and treatment is becoming increasingly prevalent in the perioperative setting across all care environments.⁽¹⁻³⁾
- A standardized curriculum does not currently exist for anesthesiology residency programs throughout the United States. ⁽¹⁻³⁾
- POCUS skills are now incorporated into ABA examinations and OSCEs. ⁽¹⁻³⁾
- Our mission is to improve our existing anesthesiology training by integrating POCUS learning at our institution comprised of 21 residents per year in a University-affiliated hospital setting

Structure and Methods

- CA1 and CA3 residents participate in the POCUS intensive during an outpatient-style regional rotation.
- Information priming** via self-guided online modules involving image acquisition, anatomy, and pathology:
 - Basic Lung
 - Focused Cardiac (FATE)
 - Gastric
 - Trauma FAST
 - Airway
- Hands-on practice** via standardized patients, expert-guided instruction sessions, and view acquisition practice on real patients
- Feedback** via pre- and post-curriculum confidence surveys and knowledge assessments
- Repetition** via repeated knowledge assessments and practice OSCEs at time intervals of 1, 3, 6 and 12 months

Goals and Future

- Improve trainee ability to utilize POCUS in perioperative setting for clinical decision making
- Offer an effective model for POCUS training to other residency programs
- Improve resident performance on OSCE and board examinations



Conclusion

We have successfully created and integrated a comprehensive POCUS curriculum tailored to anesthesiology training at our institution to meet our goal of improving trainee proficiency in POCUS. This curriculum offers a model for standardizing POCUS training among residencies across the United States.

Future data collection planned for pre-and post-curriculum confidence surveys and resident scores on assessments

Affiliations

1. UAB Department of Anesthesiology and Perioperative Medicine

References

- Ramsingh D, et al. Perioperative Point-of-Care Ultrasound: From Concept to Application. Anesthesiology. 2020 Apr;132(4):908-916. doi: 10.1097/ALN.0000000000003113.
- Yuriy S. et al. Diagnostic Point-of-Care Ultrasound, Recommendations From an Expert Panel, Journal of Cardiothoracic and Vascular Anesthesia, Volume 36, Issue 1,2022, Pages 22-29, ISSN 1053-0770, hOps://doi.org/10.1053/j.jvca.2021.04.016.
- Sanders JA, et al. Incorporating Perioperative Point-of-Care Ultrasound as Part of the Anesthesia Residency Curriculum. J Cardiothorac Vasc Anesth. 2019 Sep;33(9):2414-2418. doi: 10.1053/j.jvca.2019.04.010. Epub 2019 Apr 16.