Are We Teaching Anesthesiology Residents The Skills That They Will Need to Be Successful in The Future?

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The University of Iowa

Disclosures

- ACGME: Anesthesiology RC, Vice Chair
- ABA: Basic Exam Senior Editor
- ABA: MOCA Minute Senior Editor
- ABA/ASA Perioperative GME Workgroup (ABA representative), 2015-2016

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Objectives

Upon completing this learning activity, participants will be able to…

- Discuss the rationale for teaching new technical skills, e.g. perioperative ultrasound, in anesthesiology training.
- Discuss the rationale for teaching quality improvement, management, and leadership skills in anesthesiology training.

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Case #1

38-year-old G_1P_0 with preeclampsia with severe features is undergoing induction of labor.

18 hours into the induction, she is is oliguric.

?DDx

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Case #2

38-year-old G_1P_0 with preeclampsia with severe features had cesarean delivery for nonreassuring fetal status with spinal anesthesia.

In the PACU, her BP is 105/55 mmHg.

?DDX

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Case #3

38-year-old G_1P_0 presents to the ED with vaginal bleeding. She is hypertensive. The presumed diagnosis is preeclampsia with severe features and placental abruption. Both fetus and mother are unstable and a stat CD is scheduled. The patient is very edematous and has no IV access.

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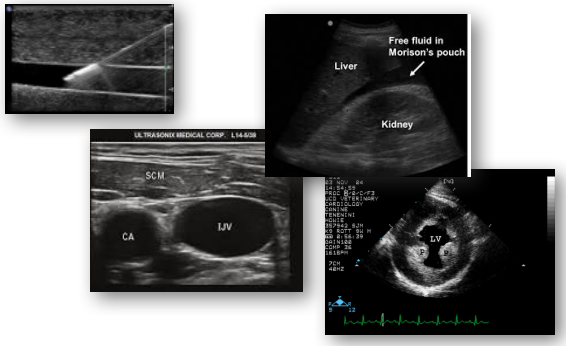

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ACGME

Accreditation Council for Graduate Medical Education

ACGME Program Requirements for Graduate Medical Education in Anesthesiology

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Definition and Scope of the Specialty

The Review Committee representing the medical specialty of anesthesiology exists in order to foster and maintain the highest standards of education and educational facilities in anesthesiology, which the Review Committee defines as the practice of medicine dealing with the peri-operative management of patients. This includes the peri-operative/peri-procedural management of patients during surgical and other therapeutic and diagnostic procedures. This management encompasses the pre-operative preparation of the patient and their peri-operative maintenance of normal physiology, as well as the post-operative relief and prevention of pain. An anesthesiologist is skilled in the management and diagnosis of critically-ill patients, including those experiencing cardiac arrest, and in the diagnosis and management of acute, chronic, and cancer-related pain.

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IV.A.5.	**ACGME Competencies**
	The program must integrate the following ACGME competencies into the curriculum: (Core)
IV.A.5.a)	**Patient Care and Procedural Skills**
IV.A.5.a).(2)	**Residents must be able to competently perform all medical, diagnostic, and surgical procedures considered essential for the area of practice. Residents:** (Outcome)

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IV.A.5.a).(2).(l)	patients whose peri-operative care requires specialized techniques, including: (Outcome)
IV.A.5.a).(2).(l).(i)	a broad spectrum of airway management techniques, to include laryngeal masks, fiberoptic intubation, and lung isolation techniques, such as double lumen endotracheal tube placement and endobronchial blockers; (Outcome)
IV.A.5.a).(2).(l).(ii)	central vein and pulmonary artery catheter placement, and the use of transesophageal echocardiography and evoked potentials; and, (Outcome)
IV.A.5.a).(2).(l).(iii)	use of electroencephalography (EEG) or processed EEG monitoring as part of the procedure, or adequate didactic instruction to ensure familiarity with EEG use and interpretation. (Outcome)

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Outcome Requirements: Statements that specify expected measurable or observable attributes (knowledge, abilities, skills, or attitudes) of residents or fellows at key stages of their graduate medical education.

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Content Outline for

Primary Certification in Anesthesiology

This content outline covers the In-Training, Part 1, BASIC, and ADVANCED Examinations

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Revised – May 2016

I. Basic Topics
  A. Basic Sciences
    1. Anatomy
      a. Radiologic Anatomy
        1) Neck (Including Doppler Ultrasound for Central Venous Access)
    2. Physics, Monitoring, and Anesthesia Delivery Systems
      a. Mechanics
        3) Principles of Ultrasound: Obtaining an image, resolutions, depth, frequency, resonance
      b. Flow Velocity
        3) Principles of Doppler Ultrasound

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II. Advanced Topics
  A. Basic Sciences
    1. Physics…
      b. Instrumentation
        4) Ultrasound-Guided Placement of Invasive Catheters (Arterial, Central Venous) and Nerve Blocks

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ABA

APPLIED EXAMINATION

Objective Structured Clinical Examination

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B. Technical Skills

1. Interpretation of monitors

2. Interpretation of echocardiograms *(Interpret basic transesophageal echocardiographic images relevant to anesthesia practice)*

3. Application of ultrasonography *(Identify relevant normal anatomy using ultrasonography)*

The successful candidate will identify the relevant anatomy using an ultrasound probe with a simulated patient and may be asked to demonstrate simulated needle placement technique for scenarios chosen from among the following procedures:

a. Vascular cannulation
   i. Internal jugular vein
   ii. Cubital fossa vessels
   iii. Radial artery
   iv. Femoral vessels
b. Nerve blocks
   i. Interscalene
   ii. Supraclavicular
   iii. Transversus abdominis plane (TAP)
   iv. Femoral
   v. Adductor canal (saphenous)
   vi. Popliteal

ACGME Program Requirements for Graduate Medical Education in Emergency Medicine

IV.A.5.a).(2).(c).(viii) emergency department bedside ultrasound; (Outcome)

IV.A.5.a).(2).(c).(viii).(a) Residents must use ultrasound for the bedside diagnostic evaluation of emergency medical conditions and diagnoses, resuscitation of the acutely ill or injured patient, and procedural guidance. (Outcome)

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- ~~Transitional year~~
- ~~Surgery~~
- ~~Pediatrics~~
- ~~Internal medicine~~

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Options

- Just add as general procedural skill (such as central lines, evoked potentials)
- Add an ultrasound rotation
  - Clinical base year
  - Clinical anesthesia years

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Ultrasound

- Vascular access (arterial and venous)
- Diagnose cardiac pathology
- Diagnose pulmonary pathology
- Intra-abdominal process (hemorrhage)
- Assessment of gastric contents
- Emergency airway management

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"Don't worry about people stealing your ideas. If your ideas are any good, you'll have to ram them down people's throats"

Faqimi Fauzi

Saturday - Sep 22, 2012(6:56 am)

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