

**Shock: Post-Workshop Evaluation**

% of all students  
(n=365) who  
Agree/Strongly Agree

The workshop achieved the learning objectives.	100
The workshop was a valuable learning experience.	98.6
Reviewing the pre-workshop voice-over presentation helped to reinforce my understanding of shock.	96.2
Participating in the simulation component of the workshop helped to reinforce my understanding of shock.	94.4
The simulation cases were at an appropriate level of difficulty.	96.7

**9 Adventures in Didactic Curriculum (Re) Design: Systems Thinking for Core Topics**

*Grall K, Nelson J/Regions Hospital, Health Partners Institute, St. Paul, MN*

**Background:** The Residency Review Committee for Emergency Medicine requires 5 hours per week of didactic learning. Often lectures are given sporadically without consideration for targeted learners’ needs. Learning can be suboptimal and contextual goals and objectives unclear. Many undergraduate medical institutions have transitioned curriculum into system-based blocks with excellent educational results.

**Educational Objectives:** We redesigned our didactic curriculum to repeat on an 18-month cycle and organized it into intensive systems-based blocks (Respiratory, Neuro, GI etc.) assigning a “Topic Guru” from our Core Faculty. Our objective was to create a deliberate didactic curriculum that examines a specific system from multiple viewpoints. A secondary goal was ongoing engagement of our Core Faculty into the didactic curriculum.

**Curricular Design:** We designed an 18-month repeating curriculum based on physiologic systems. Topic Gurus were notified approximately 3 weeks in advance of their upcoming month and responsibilities. Repeating curricular elements included:

- Distributed reading and podcast / blogs/videos
- Core Topic discussion session using active learning / Flipped Classroom
- Core Topic Review Session
- Ask the Expert Q and A Session
- Emerging Issues / Advance Topic Session
- Pharmacology / Quality / Procedure (PQR) Rounds
- Regions RAP (Monthly Review of Podcasts, Blogs,

Videos) or Journal Club

This curriculum re-design was introduced in July 2017 and has been continued for the past 5 months.

**Impact/Effectiveness:** Bi-monthly meetings held with Topic Gurus to assess barriers to implementation, including difficulty scheduling outside speakers and understanding new recurring curricular elements. These barriers are less intrusive with each passing month. Overall curriculum changes have been extremely well received by both our residents and Topic Gurus based on conference feedback. Future goals are to further examine impact on our learners.

**10 After Action Report: Reflective Practice Beyond the Core Curriculum**

*Erogul M, Schiller J/Maimonides Medical Center, Brooklyn, NY*

**Background:** The sprawling core curriculum of emergency medicine leaves little time in the didactic schedule for reflective practice and attention to the topics outside the umbrella of medical knowledge, patient care and procedural skills. To that end, our ED has instituted “After Action Report,” a yearlong longitudinal thread to encourage residents to think and reflect on their practice. Sample topics for AAR include professional boundaries, working in a medical system with healthcare disparities, addressing practical ethical quandaries in the ER, dealing with inter-professional conflict, intrapersonal awareness in the stressful clinical environment, the hidden curriculum of emergency medicine, etc. The sessions emphasize reflecting on one’s actual practice and the lived experience of being an emergency physician. The goal, broadly defined, is professional development and development of humanistic values. We believe this curriculum also supports resident wellness.

**Educational Objectives:** At the close of this academic year, our residents are expected to:

- Maintain proper professional boundaries with the patient and within the medical team.
- Recognize and work through common ethical dilemmas that take place in the ED.
- Foster intrapersonal awareness in the stressful clinical environment.
- Develop skills to identify and respond to emotionally driven conflict.
- Acknowledge and resolve contentious behavior between colleagues, departments, and other staff.
- Recognize the reality of healthcare disparities in medicine and formulate a healthy internal narrative about encountering these disparities.
- Effectively analyze and participate in effective

communication interactions with patients with varying cultural backgrounds.

**Curricular Design:** Approximately once a month, select residents participate in a one hour small group facilitated by a faculty preceptor. The small group activities are mapped in advance with cases, questions and suggested answers for the preceptor. The groups are a mix of residents at all levels of training (EM1, EM2 and EM3). Rotation activities vary, depending on subject, including small group didactic, role-playing, out-of-hospital activities, as well as use of mixed media stimulus. Residents will be expected to participate in all rotation exercises, and may be required to submit written or spoken assignments.

**Impact/Effectiveness:** Reflective practice can be an effective modality in achieving empathy among practitioners and their patients, which in turn translates to strengthening several ACGME milestones, including: professional values; professional centered communication; and team management. The AAR provides a comfortable forum for resident discussion and possible incorporation of these topics into their practice.

## 11 An Advanced Perfusion Elective for Emergency Medicine Residents

*Butterfield M, Wilson J /University of South Florida/ Tampa General Hospital, Tampa, FL; University of South Florida/ Tampa General Hospital, Tampa, FL*

**Background:** We focus on two exciting developments in the management of acute and chronic cardiopulmonary failure not yet addressed in standard residency training:

1) extracorporeal membrane oxygenation (ECMO) and 2) ventricular assist devices (VADs).

1. A growing number of tertiary medical centers are using ECMO to resuscitate patients with cardiac arrest, shock, or ARDS, with encouraging preliminary results. Emergency physicians (EPs) are becoming involved at every step in the care of these patients, from the decision to initiate ECMO to placing patients “on pump” and ICU management
2. An increasing number of patients with advanced heart failure are receiving implantable VADs. These devices use continuous mechanical pumps to bypass the native heart and increase cardiac output. Understanding the health needs for these patients will become an essential skill set for EPs regardless of practice setting.

### Educational Objectives:

1. Recognize the clinical indications, physiology, and complications related to both arterial-venous (AV) and venovenous (VV) ECMO
2. Gain a practical understanding of how VA and VV ECMO circuits work from cannulation to pump management and troubleshooting, weaning, and decannulation

3. Recognize the indications, function, and potential problems related to mechanical support devices in patients with advanced heart failure

### Curricular Design:

1. Duration: 2-4 weeks
2. Components:
  - a. Didactic and Practical Instruction with VAD coordinators and perfusionists to learn about device function, malfunction, and troubleshooting.
  - b. Procedural Observation: Residents will observe and possibly assist ECMO cannulation and observe VAD placement in the OR.
  - c. Self-Directed Rounding: Residents will follow post-intervention ICU patients daily
  - d. Attend weekly VAD/transplant review conference
  - e. Self-Study: We developed a structured syllabus with readings/multimedia
  - f. ECMO Call: Residents will be “on call” for after-hours ECMO cannulation during weekdays (M-F)

### Impact/Effectiveness: Effectiveness:

1. Feedback: Mid and end of rotation
2. Scholarly Work: Update/revise ED ECMO protocols, curriculum and syllabus

### Impact:

1. Clinically and professionally position EPs to make critical management decisions in patients with heart failure or acute cardiopulmonary failure
2. Spur interest and research in these areas
3. Possible collaboration with European ECMO centers

### SAMPLE SCHEDULE

Week 1:

	MON	TUES	WED	THURS	FRI
AM	-Orient with VAD/ Perfusionists -OR Cases -Rounding	-OR Cases -Rounding	-VAD/ECMO seminar 1	(No OR Cases) -Rounding	-OR Cases -Rounding
PM	-Loose ends -Self study -ECMO call	-Loose ends -Self study -ECMO call	-VAD/ECMO seminar 1 -Loose ends -Self study -ECMO call	-Transplant Conference -Loose ends -Self study -ECMO call	-Loose ends -Check-in -Self study -ECMO call

Week 2:

	MON	TUES	WED	THURS	FRI
AM	-OR Cases -Rounding	-VAD/ECMO seminar 2	-OR Cases -Rounding	(No OR Cases) -Rounding -Cardiohelp (portable ECMO) training	-OR Cases -Rounding
PM	-Loose ends -Self study -ECMO call	-VAD/ECMO seminar 2 -Self study -ECMO call	-Loose ends -Self study -ECMO call	-Transplant Conference -Loose ends -Self study -ECMO call	-Loose ends -Feedback -Self study -ECMO call

Sample Schedule

Week 3-4:

	MON	TUES	WED	THURS	FRI
AM	Ride with mobile ECMO Teams/ Shadow CT ICU in Paris or Dusseldorf* (*under discussion: PMID 2717983)				
PM					