

ULTRASOUND TRAINING AS AN  
OPPORTUNITY TO INTRODUCE  
COMPETENCY-BASED ASSESSMENT IN  
THE PRECLINICAL MEDICAL SCHOOL  
CURRICULUM

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# Disclosure

I do not have any financial relationships with commercial interests related to the content of this educational activity

Ultrasound training is a unique and exciting way to meet the burgeoning Liaison Committee on Medical Education (LCME) standard of competency-based assessment.



# WSU-SOM Program

- ▣ Portable ultrasound machines provided by GE
- ▣ Training incorporated into year 1 curriculum
- ▣ MS1 training reinforced Gross Anatomy and students learned clinical applications throughout the sophomore Physical Diagnosis Course



# WSU-SOM Program

- ▣ Faculty from the Henry Ford Health System Departments of Surgery, Emergency Medicine, and Radiology responsible for training
- ▣ Freshman training includes a 30 minute introduction followed by hands-on training in small groups
- ❖ Attendance is mandatory





School of Medicine

# Year 1 Curriculum

1. Introduction to Ultrasound
2. Abdominal & Genitourinary
3. Cardiovascular
4. Musculoskeletal
5. Skills Assessment







School of Medicine





School of Medicine

# WSU-SOM PROGRAM

- Largest single-campus medical school in U.S.
- Devices available for students to check out
- ❖ Student super users as trainers



# Year 2 Curriculum

- ▣ Incorporated into Physical Diagnosis Course
- ▣ Cardiovascular and Abdominal systems
- ▣ Pathophysiology taught during debriefing sessions





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# WSU-SOM Program

- ▣ Summer externships
- ▣ Well-developed 3<sup>rd</sup> year clerkship US curriculum at Henry Ford clinical campus
- ▣ 4<sup>th</sup> year electives in Emergency Medicine & Surgery





# Student Satisfaction Survey\*

Majority of students felt US was a valuable tool that they would use in their medical practice as primary care physicians or subspecialists

\*Sishir, *et al.* Journal of Ultrasound in Medicine 2008

# The World of Accreditation



LIAISON COMMITTEE ON MEDICAL EDUCATION  
**LCME**



School of Medicine

# K1: KNOWLEDGE OF THE NORMAL STRUCTURE OF THE HUMAN BODY

Anatomy  
Histology-Embryology  
Neuroscience  
Physical Diagnosis  
Performance on USMLE Step 1

Ultrasound training



# S1: THE ABILITY TO PERFORM A SATISFACTORY PHYSICAL EXAM

Performance in clinical medicine 1 and 2, using  
standardized patients

Performance on school Year 3 OSCE

Satisfactory evaluations in the required Year 3-4  
clinical rotations

Ultrasound skills assessment during PD



# LCME ED- 5

A medical education program must include instructional opportunities for active learning and independent study to foster the skills necessary for lifelong learning.





HHMI



Scientific Foundations for Future Physicians



2009

*Report of the AAMC-HHMI Committee*



School of Medicine



# Purpose

Identify most important scientific competencies required of matriculating students, as well as those required of medical school graduates



## **Competency M2**

*Apply major principles of physics and chemistry to explain normal biology, the pathobiology of significant diseases, and the mechanism of action of major technologies used in the prevention, diagnosis, and treatment of disease.*



# Conclusion

- ▣ Ultrasound training is a natural fit for active-learning and competency-based education in the undergraduate medical school curriculum.
- ▣ As more medical schools adopt ultrasound training into their curriculum the LCME will begin to expect it.



# Acknowledgements

David Amponsah MD, RDCS

Nelia Afonso MD

Scott A. Dulchavsky MD, PhD

