2019

Immersion in Physiology Bolsters Bedside Mechanistic Thinking

Rebecca Miller
Virginia Commonwealth University

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Purpose and Background
- Compression of education and training with other responsibilities into more limited work hours
- Shift towards algorithm-based teaching/practice
- Less time spent in practice of basic science
- Intellectual Curiosity/Mechanistic Thinking less emphasized
- Self-directed learning and intellectual curiosity a primary focus for improvement in 2017

Mission Statement
Through science experimentation in applied physiology, housestaff will reconnect with basic physiology and apply learned principles to commonly encouraged clinical scenarios. Housestaff will participate in experiments to stimulate intellectual curiosity among participants and encourage appreciation and incorporation of physiology into their clinical and teaching roles.

Learner Objectives
By the end of the course, residents will be able to:
1. Reconnect with and review concepts basic physiology
2. Participate in physiology experiments
3. Gain an appreciation for the scientific process
4. Practice presenting scientific data
5. Utilize concepts in physiology to promote in intellectual curiosity and mechanistic thinking
6. Apply principles of physiology to commonly encountered clinical scenarios
7. Integrate science and pathophysiology into clinical practice

Results
- Total 36 residents and 15 faculty attended to date
- Pre-course, immediate post-course, and 3-month post-course surveys
- Response rate: 100%, 83%, and 80% respectively
- Overwhelmingly positive feedback
- High satisfaction with interactions with faculty and peers
- >90% of residents felt we met objectives
- Self-reported behavior questions to evaluate change

Discussion
- Successfully implementation of an immersive course in physiology
- Residents positively regarded the course
- Nearly all residents reported we met our objectives
- Residents self-reported behaviors changed and lasted 3 months after the course
- We suspect these changes in behavior will be beneficial to patient care and quality of care provided

Future Directions
- Include all medical residents
- Partner with other departments/institutions
- Objective measures: ITE, Board pass rate
- Impact on burnout and job satisfaction

References