

Successful Implementation of Ultrasound Curriculum During the Pandemic

Chairs and Administrators,

On behalf of the Ultrasound Curriculum Module Directors (myself, Dr. Greg Snead and Dr. Sumera Ali), I want to take this opportunity to acknowledge and thank the faculty from your Departments (listed at the bottom of this email) for their participation in the ultrasound curriculum this past year.

Despite a pandemic induced interruption on campus, we were able to provide what we believe was an exceptional hands-on experience for our M1 students. This was only possible because of the dedication of the basic science and clinical faculty and staff that helped make this year a success. I want to take a moment to also acknowledge the Clinical Skills Center staff, especially Michael Orfanos, who were able to arrange for us to be able to utilize standardized patients in our in-person sessions during the pandemic. The inclusion of the standardized patients was critical to the success of the program. The requirement for wearing of gloves, procedural masks and face shields resulted in a safe educational environment for the students, faculty and standardized patients.

In a typical year we can run the entire M1 or M2 class through our hands-on ultrasound sessions in one afternoon. The social distancing guidelines instituted this last year during the pandemic turned this one afternoon into 3-4 afternoons. We offered four in person hands-on ultrasound training for the entire class of 174 M1 students in the current academic year. In the first session in the Fall, the M1 students worked in pairs to scan their forearms, hands and neck. In the next two sessions they scanned targets on their own bodies. The spacing of students at individual tables in the classroom and the use of a color-coded card system (to signify that they give permission to the faculty to see their own body scans) provided students with the ability to maintain their privacy during the scanning sessions.

Prior to the pandemic, students worked in groups of 5 with a basic science or clinical faculty member to scan a standardized patient in the Clinical Skill Center. The individual approach we took this last year resulted in increased student engagement and increased student hands on scanning time which are both critical components to increased learning. The faculty all agreed that this year's students appeared to be more skilled at ultrasound than previous M1 classes at this point in their education. This increased skill was clearly evident in our last scanning session where we had the M1 students work in teams of 3 and rotate through 14 different stations at which they were asked to demonstrate their ultrasound skills in a timed fashion. The faculty were thoroughly impressed with the knowledge and skills that the students had obtained from our in-person ultrasound sessions this year despite an ongoing pandemic.

Unfortunately, we were only able to offer the M2 students with a single in-person, hands-on ultrasound experience this last year. The very busy M2 academic calendar prevented us from offering more hands-on sessions. The one hands on session we did offer to the M2s served to reinforce the ultrasound skills that they learned in their M1 year prior to the pandemic.

We appreciate the involvement of the following basic science and clinical faculty and staff in the implementation of a successful ultrasound curriculum during the pandemic:

Kevin D. Phelan, Ph.D. (Neurobiology and Developmental Sciences)

Mohsin Syed, Ph.D. (Neurobiology and Developmental Sciences)

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Celia Mccaslin (Neurobiology and Developmental Sciences)

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Ebaa Jastaniah, M.D. (Pediatric Emergency Medicine)

Sumera Ali, M.D. (Radiology)

Michae Orfanos (Clinical Skills Center)

Kevin D. Phelan, Ph.D.

Program Director, ArkanSONO SEPA

Professor, Dept. Neurobiology and Developmental Sciences

College of Medicine

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