



Simulation in Point of Care Ultrasound (PoCUS)

BodyWorks Eve has just been admitted into New York's VA Medical Center presenting with shortness of breath, tachycardia and chest pain...

The VA Medical Center (NY Harbor) Simulation Laboratory has just taken delivery of BodyWorks Eve to develop and support its educational programs in Point of Care ultrasound (PoCUS). Dr. Brian Kaufman, Professor of Medicine, Anesthesiology, Neurology and Neurosurgery and Director of the Simulation Laboratory discusses the growing demands for PoCUS training and explains why simulation has an important role in delivering quality educational outcomes.

The VA Medical Center provides a diverse range of programs for resident training across multiple clinical specialties throughout the NYU Langone Health System and for medical students at the New York University School of Medicine. The current cohort of ultrasound trainees includes approximately 14 Hospitalists, who are multi-disciplinary faculty members with three years of training in Internal Medicine, and have been hired by their institutions to oversee non ICU patients throughout NYU Langone's Internal Medicine Service. "Previously, our PoCUS training included weekly didactic lectures and bedside supervised practice using the large ultrasound machines, as well as some simulation for pathology", says Dr. Kaufman. "But with increased use of the portable ultrasound scan across our affiliated institutions, along with our current trialling of the Butterfly handheld ultrasound units, PoCUS training is high on our agenda to meet the inevitable demand these new devices will bring,

"We are confident that integrating BodyWorks Eve into our programs will enable us to deliver the best possible educational outcomes for our learners."

and it is important we have a comprehensive program in place that assures quality and safety in ultrasound practice. Once trained, our Hospitalists will be able to incorporate PoCUS into bedside rounds and teaching for their teams of medical residents and students."

Meeting the demand, reducing the challenges of ultrasound training

Ultrasound education has been a key component of the Center's simulation elective for two years now. The training program is continuing to evolve as new pathologies become available that can be integrated into simulated scenarios to challenge doctor's critical thinking skills in preparation for real patient encounters. "BodyWorks Eve will facilitate improvements to

our current ultrasound training programs”, says Dr. Kaufman. “The addition of high quality abdominal images on Eve will allow for the introduction of new patient scenarios in which a PoCUS exam is important. With the addition of HeartWorks on the Eve manikin, a good range of cardiac pathology is also available, which not only has relevance for PoCUS examinations, but also for specialist cardiac trainees, who need a comprehensive education in Transesophageal and Transthoracic Echocardiography (TEE & TTE).”

“We already run a monthly simulation conference for our critical care fellows, and I can see that running HeartWorks on the Eve manikin will significantly increase our training capability for our cardiac anaesthesiology trainees and cardiology fellows. We are in the early stages of developing the TEE program and are currently working with faculty to run these sessions. I fully expect that we will also run TEE training for our anesthesiology residents, who are now required to be able to recognize the common intraoperative views.”

Setting standards in ultrasound practice

Simulation over recent years has increasingly become a valuable assessment tool, helping healthcare providers to define, implement and measure benchmark standards of safe clinical practice. In the case of ultrasound, established protocols such as

FAST and RUSH clearly define required ultrasound views as the basis of assessment for trauma and critical care patients. Commenting on how BodyWorks Eve might be utilized to ensure clinicians deliver consistently high quality scans and diagnoses across the NYU Langone Health System, Dr. Kaufman’s initial plans will be to develop standardized assessments following the Hospitalists’ training period. “We plan to identify score criteria, and compare these scores on Eve to the quality of their ultrasound examinations on healthy, live volunteers and hopefully on real patients as well. In the case of protocol based training, I am currently in discussion with our surgical faculty who are interested in Eve for assessment of surgical resident skills in FAST. This is still in a preliminary phase, but I can see that this will also be of value to our Emergency Medicine Department, and it is possible that a simulation based assessment could be a component of the certification process.”

Improving educational outcomes

Looking ahead to future developments in ultrasound training at the VA Medical Center, Dr. Kaufmann sees many exciting possibilities. “Ultrasound is growing exponentially. Increasing numbers of clinicians from multiple clinical disciplines are now wanting training in ultrasound, and more recently, acute care nurse practitioners and acute care physician assistants have been requesting training in PoCUS. It is therefore becoming increasingly important that we create high quality training programs that will meet their specific needs as they seek to deliver the best possible care for their patients. We are confident that integrating BodyWorks Eve into our programs will enable us to deliver the best possible educational outcomes for our learners.”

To find out more about how BodyWorks Eve could help your trainees get in touch today.

Email: hello@medaphor.com

UK: +44(0)2920 756534

US & Canada: +1 (770) 777-8191

China, Japan & Asia-Pacific: +(852) 3568-9009



www.medaphor.com