

SonoSim Case Study

Enhancing Undergraduate Medical Education with Ultrasound at the University of South Florida Morsani College of Medicine



Introduction

The University of South Florida (USF) Morsani College of Medicine has long recognized the importance of ultrasound education within its medical school curriculum. However, in previous years there was no formal integration into the curriculum. Recognizing the need for a coordinated ultrasound education program, educators like Dr. Frederick Slone decided to enhance the ultrasound learning experience. This case study explores how SonoSim was implemented to expand ultrasound education and its impact on the program.

How It Started

Initially, USF’s ultrasound education was limited. With only one ultrasound machine available, Dr. Slone took it upon himself to provide instruction during small group sessions in specific elective courses, such as heart and central line placement labs. Despite his efforts, the scope of the program was restricted—both in terms of student reach and hands-on opportunities. A key barrier was the lack of time and resources to incorporate ultrasound training into the curriculum, coupled with the difficulty of providing adequate scanning practice to 180 students per class with limited faculty with expertise in ultrasound.

Limitations



Student Reach



Time



Faculty Expertise

How SonoSim Helped

USF needed a solution that allowed students to independently acquire foundational ultrasound knowledge, thus freeing up class time. SonoSim offered exactly that—a comprehensive, self-guided learning platform capable of taking students from zero ultrasound experience to a functional understanding, that included hands-on scanning of real anatomy, as well as pathology.

Once SonoSim was integrated, USF no longer needed to develop their own ultrasound teaching content from scratch. The platform provided a step-by-step approach that was ideal for medical students. Year one students begin by completing specific Anatomy & Physiology topics using the SonoSim Ecosystem’s Learn & Scan elements, followed by hands-on scanning sessions in the lab. Faculty members use SonoSim assignments and administrative tools to monitor progress.

In year two, the program expands to include core clinical topics and focus on abnormal pathologies. During this year, there are three courses that each feature at least three SonoSim core clinical topics. Dr. Slone conducts brief didactic sessions to highlight essential points before students dive into relevant SonoSim training, followed by focused lab scanning. The introduction of SonoSim’s QuestionBank in the second year ensures that students engage with the topics, as they can only answer correctly if they’ve completed the SonoSim content. This has been effective in reinforcing the learning material and integrating ultrasound education into the students’ routines.



“In their second year when we’re talking about abnormal, SonoSim is a huge advantage because now they can see gallstones, ascites, and small bowel obstruction. They can see all the clinical [pathologies] on real patients where it would be very difficult to see otherwise.”

Dr. Frederick Slone

Assistant Professor, Internal Medicine, University of South Florida

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How It's Going

The integration of SonoSim has proven highly effective over the past seven years, as students consistently demonstrate enhanced understanding and ultrasound acquisition skills. The platform's self-paced courses, combined with hands-on scanning, provide a comprehensive learning experience that bridges the gap between theory and practice.



"The ones that have really gone through the courses & scanning cases are much more advanced than the ones who don't look at it. It's so obvious."

Dr. Frederick Slone

Assistant Professor, Internal Medicine, University of South Florida

Benefits

Enhanced Learning Experience

SonoSim's extensive library of normal and abnormal cases enriches students' understanding of sonographic anatomy and sonographic technique, providing exposure to conditions they may not encounter in clinical practice. This self-paced learning approach equips students with essential skills, particularly in point-of-care ultrasound.

Improved Preparation for Hands-On Sessions

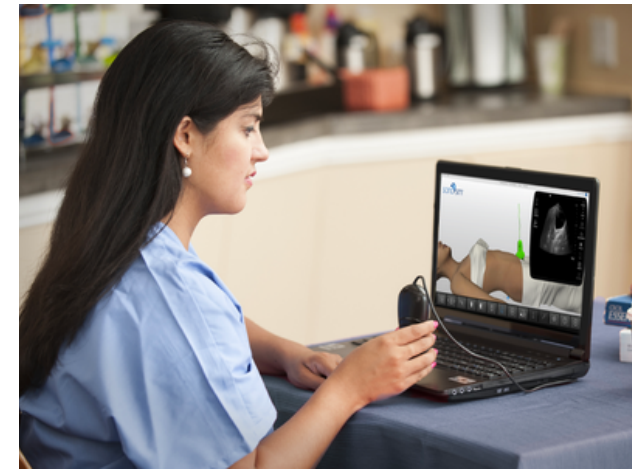
With SonoSim, students arrive at hands-on sessions better prepared. This preparation enhances the effectiveness of their clinical training, as they can focus more on refining their skills rather than learning the basics. In large programs like USF, standardized access ensures that classes of over 100 students receive the same high-quality training, a major advantage for medical schools.

Streamlined Faculty Workload

SonoSim also benefits faculty by simplifying the process of tracking and assessing student progress. The platform's administrative tools make it easier to manage smaller groups, especially during clerkship rotations, allowing faculty to focus more on teaching and less on administrative tasks.

Setting a New Standard in U/S Education

The adoption of SonoSim has set a new standard in ultrasound education at USF. By providing students with the tools and confidence they need to excel in their clinical training, SonoSim is helping to elevate the overall quality of education and preparing students to meet the demands of modern medical practice.



What's Next?

USF plans to continue enhancing ultrasound education within its undergraduate medical education program by leveraging SonoSim's capabilities and aims to expand its use to other programs across the Morsani College of Medicine. By maintaining the focus on step-by-step, self-guided learning, the program plans to ensure that students build strong foundational skills before transitioning into their clinical years. The ongoing partnership with SonoSim will keep providing students with access to comprehensive ultrasound training that bridges the gap between the classroom and clinical application.