

42 Ultrasound-Guided Mystery Key Identification: An Emergency Medicine Learner Module

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Introduction/Background: Point-of-care ultrasound (POCUS) is ideal for integration into learning at both the undergraduate and graduate medical education levels. Opportunities to practice transducer manipulation are often limited early in physician training. This learner module allows practice with basic ultrasound techniques using gamification to open a locked chest.

Learning Objective: Learners will be able to: develop skill with manipulation of an ultrasound transducer; identify features of a structure with ultrasound imaging; and apply problem solving skills to select the correct key to open a locked chest.

Curricular Design: This learner module is designed to enhance problem solving skills and provide a hands-on experience with ultrasound transducer manipulation. During the ten minute session, the learner is provided with written instructions, 7-10 metallic keys and a locked wooden chest (Figures 1-2). A copy of the correct key to open a lock on the chest is hidden within a gelatin phantom. Learners describe characteristics of the correct key utilizing ultrasound-guidance. With correct identification, the learner will open the locked chest, successfully completing the module. Performance will be assessed on number of attempts to successfully identify the correct key. While preparing for initial implementation, the phantom material was changed from gel wax to gelatin to improve image quality. The position of the key was also adjusted in the gelatin to improve visualization.

Impact/Effectiveness: This learner module was implemented at a community academic residency during September 2019 as one of several hands-on simulation stations. Initial experience utilizing the module revealed its practical use as an engaging way to practice POCUS. Verbal feedback was positive from both medical student and resident learners. This module can be inexpensively reproduced and may be especially useful for learners early in their POCUS education.

*Out of the many keys you see, all you need are three
To know which ones you seek, give the phantom gel a peek
For within the gel lie the matches, of those that unlock the latches
But make sure to be quick, to find the ones that do the trick
For every second points are lost,
and an unfortunate victim's life it may cost*

Figure 1. Mystery Key Instructions.



Figure 2. Mystery Key Station Setup

43 Wellness Coaching for Emergency Medicine Residents: an Individualized Approach to Resident Well-Being

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Introduction/Background: Activities to address resident well-being tend to lack individualization. ACGME CLER Program guidelines require wellness to be addressed, however lectures on the various aspects of well-being can be too generalized and not truly applicable. Our program attempted to reconcile this in a way that was comprehensive and personal.

Learning Objective: To develop a program to improve resident wellness and provide the necessary tools to maintain wellness in the future.

Curricular Design: We initiated a wellness program that featured individualized Wellness Plans and utilized clinical psychologists as Wellness Coaches. Participants were voluntarily invited to complete an initial confidential validated Stanford Physician Wellness Survey, the Holmes-Rahe Life Stress assessment, the Professional Quality of Life Scale and a 22-item Lakeland EM Wellness survey. From these assessments they developed a Daily Self Care Plan that addressed the six dimensions of wellness: physical, emotional, spiritual, intellectual, environmental, and social. Residents met with their Wellness Coach between 2-4 times during the year. Additionally, the Wellness Coaches conducted four group sessions with the residency as a whole. After completion of the pilot year, residents completed the same assessments and an eight-item completion survey to evaluate the effectiveness of the program.

Impact/Effectiveness: Overall, 24 residents participated in the study. Post-completion resident surveys show an