

## 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

average improvement of 1.9 points on a 0-10 scale on perceived overall well-being after course completion. 86% of residents stated they were satisfied with the program and 88% would recommend the program to fellow residents. 88% would continue to participate in the program. Based on our pilot year data, our methods appear to be very effective at promoting well-being. Our program could be used as a model for any residency program.

## 44 Who's the Boss? In-situ Inter-Professional Assessment of Resident Leadership Skills

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**Learning Objective:** To provide real-time inter-professional assessment of resident leadership skills and to use this assessment to better inform individual progress on the ACGME Team Management milestone.

**Abstract:** The ACGME requires that residents are evaluated on their ability to effectively lead patient-centered care teams. Timely feedback is critical for practice improvement and yet residents don't often receive this formative information during shifts. Standardized direct observation tools have proven valuable for assessment of Emergency Medicine (EM) residents and who better to provide feedback on team management skills than the actual team? We standardized our critical event debriefing process to enable the inter-professional care team to provide direct feedback on resident leadership.

In the winter of 2017, we implemented a critical event debriefing program. EM residents, faculty, EMS personnel, nurses, techs, respiratory therapists, social workers, pharmacists, and consultants are asked to participate in the debriefings. During a session, the inter-professional group is asked, "Was the Physician Team Leader (PTL) the only doctor calling out medication orders?" and "Was anyone confused at any time during the resuscitation about who was the PTL?" Residents receive the direct real-time feedback and this data is collected and reviewed by residency leadership.

The first critical event debriefing session was completed in March of 2018 and 38 forms have been completed to date. Eighteen residents have been the PTL. In three cases, the team concluded that the PTL was not the only doctor calling out orders and that someone was confused at who the PTL was during the event. As we collect more data, we will compare these responses to the current ACGME Team Management milestone evaluations and use this data to inform

future assessments. This innovation leverages a debriefing documentation tool to provide real-time inter-professional assessment of resident leadership skills. This can be applied to other milestones and easily implemented at EM programs around the country.

## 45 Women Trainees Experience Improved Residency Satisfaction Through Women Faculty and Resident Professional Development Sessions

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**Introduction/Background:** The experience of women residents in emergency medicine differs from those of their male counterparts. Women residents feel there is a deficit in topics specific to women in EM. Women residents are seeking mentoring, networking, peer support and professional development opportunities specific to them. Providing an established program to support these needs can improve the residency experience for women residents.

### **Learning Objective:**

- Provide peer support, networking opportunities, and advising for women residents.
- Improve residency/career satisfaction through an established community of women EM physicians.
- Develop a variety of career skills to help women residents reach their career goals.

**Curricular Design:** A survey of all women residents in a single EM residency program was performed to determine the need for education and discussion of professional development topics specific to women in EM. The survey identified top areas of interest for discussion which included work-life balance, leadership skills, advice for the new attending, contract negotiations, and burnout/job satisfaction. A group of women faculty and residents meets every two months to discuss the assigned professional development topic with a faculty facilitator. Women residents are scheduled off from the ED during these meetings to allow for attendance. Small group discussions led by a faculty facilitator with specific discussion questions initially occurs, with a larger group discussion afterward.

**Impact/Effectiveness:** Women trainees have noted an improvement in morale, peer support, confidence and residency satisfaction through these sessions. Trainees and faculty have also identified specific areas for improvement within the program and department which have initiated changes.