# UC Irvine

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Improvisation Clinic — Building Relationship-Centered Communication Skills and Enhancing Learner Feedback in Emergency Medicine through Applied Improvisation

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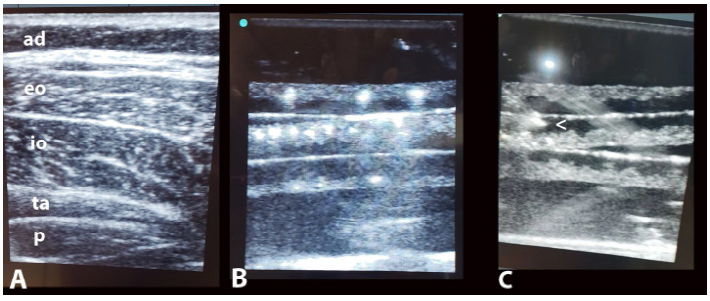
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removed from the pan and set atop the remaining model to avoid reverberation. Even with double concentrated gelatin excessive downward force with the ultrasound probe could split models Image 1: A) Mid axillary line flank layers (ad=adipose, eo=external oblique, io=internal oblique, ta=transversus abdominis, p=peritoneum. B) Gelatine and tapioca model. C) needle at arrowpoint being advanced

**Impact/Effectiveness:** A 9x13 pan sufficed for 17 residents and medical students to practice injecting specific layers. It did require removal of squares of gelatine and stacking them to avoid artifact from the bottom of the pan and to decrease damage from the probe




## 13 Ultrasound Education: Knowledge Degradation during Residency

*Pavitra Kotini-Shah, Megan Chan, Pranshul Goel, Reed Gilbert, Kayla Gross, Shaveta Khosla*

**Introduction:** Proficiency in ultrasound skills is increasingly recognized as vital in medical training, particularly for residents facing urgent clinical situations. Literature indicates a concerning decline in ultrasound knowledge retention among first-year Emergency Medicine (EM) residents and a paucity of any evaluation for long-term retention. This gap in evaluation raises concerns about the effectiveness of current training methodologies and a lack of understanding regarding ultrasound knowledge degradation and retention during residency training.

**Objectives:** We sought to evaluate knowledge gained during a dedicated ultrasound rotation during PGY1 and then evaluate knowledge retention/degradation one year later during PGY2. **Methods:** We developed an online 50-question assessment tool that covered concepts for core applications and knobology pertinent to our ultrasound machines. The tool contained multiple-choice and matching questions. We evaluated EM and EM/IM residents with this same assessment tool as a pre-test, a post-test after their PGY1 ultrasound rotation, and then a 1 year post-test during the same month in their PGY2 year. The assessments were deployed for three consecutive years, from 2020-2021, 2021-2022, and 2022-2023. Paired t-tests were used to assess statistically significant differences.

**Results:** 18 residents were in each cohort. In all three cohorts, residents consistently showed improvement on the ultrasound assessment after the rotation with an average increase of 22%, 24% and 20% in the consecutive cohorts from pre to post throughout the academic year (July to June). Across the cohorts, residents' performance consistently declined on the one-year post assessment (on average the decline was 8% in the first two cohorts and 1% in the third cohort) with lower scores compared to immediately post rotation. Across the three cohorts, the improvement from pre- to post and degradation from post to 1-year post were both statistically significant ($p<0.01$).

**Conclusions:** Our data consistently revealed ultrasound knowledge degradation across multiple years, which the COVID-19 pandemic may have influenced, but the trend reinforces the necessity for ongoing educational refreshers and re-evaluation beyond initial training to ensure residents remain proficient.




**Figure 1.** Ultrasound knowledge across the three timepoints.

## 14 Improvisation Clinic – Building Relationship-Centered Communication Skills and Enhancing Learner Feedback in Emergency Medicine through Applied Improvisation

*Brendan Freeman, Abbas Husain, Jordan Valentin*

**Introduction:** Improvisational techniques offer a novel approach to teaching relationship-centered communication (RCC) for patient care and enhancing learner feedback in emergency medicine. The "Yes, and" improv technique promotes these by accepting (yes) and building on (and) a partner's ideas.

**Educational Objectives:** Define "Yes, and" and its role in RCC and learner feedback. Review three evidence-based feedback models through a "Yes, and" lens. Apply "Yes, and" skills in improv exercises.

**Curricular Design:** Following Kern's six-step approach, this curriculum was developed to address identified gaps in RCC and feedback skills in EM residents and delivered in

workshops held in 2024. Sessions 1 and 2 focused on RCC for residents and interns, with facilitator-led discussions linking improv to patient communication. First, we played a clip from "Whose Line Is It Anyway?", a popular improvisational TV series, and then led improv scene breakout groups. Session 3 centered on learner feedback for graduate medical education leadership. It began with an overview of "Yes, and", credible feedback, and evidence-based feedback models. Activities included a "Red Ball" exercise, where participants mimed passing objects, maintaining continuity and attentiveness to illustrate communication breakdowns, followed by improv/learner scenario breakout groups.

**Impact/Effectiveness:** A post-intervention survey with a 5-point Likert scale was administered for all 3 sessions. Respondents rated highly (4-5 on Likert scale) the activity structure (96.1%), length (84.3%), engagement (100%), relevance to practice (92.3%), and facilitator skill (88.5%). Thematic analysis revealed key themes: "enjoyment/engagement," "connection to patient care," "applying improv to feedback," and "openness to future application." Based on feedback, separate sessions were created for RCC and feedback; and for future implementations, learner scenarios will be removed from the feedback-focused session.

## 15 Implementation of a "Bias Interrupter" Into the Clinical Competency Committee

*Adam McFarland, Lauren McCafferty, Jennifer Li*

**Introduction:** A residency's Clinical Competency Committee (CCC) is responsible for assessing the capability of medical trainees in the clinical environment. However, multiple studies have shown that bias, including identity bias such as gender or race, can influence the perception of resident competence. Business literature suggests that bias interrupters (BI) can mitigate the influence of bias on performance assessment, a practice that has been minimally utilized by medical training programs.

**Educational Objectives:** The objective was to implement a bias interrupter in CCC to identify and intervene when bias may contribute positively or negatively to assessment of resident clinical performance. In doing so, we also hope to identify trends in instances of bias related to identity of resident or assessor.

**Curricular Design:** The BI was implemented at monthly CCC meetings at the beginning of academic year 2024-2025. There are 12 residents discussed at each meeting. The BI is a rotating member of the residency leadership team who focuses on the content of the discussion rather than their assessment of residents, with the freedom to interrupt as needed. Data collected includes quantity of interruptions, identity of resident and assessor, and thematic analysis of comments warranting interruption.

**Impact/Effectiveness:** Preliminary data suggests that a BI adds value in CCC. Key themes of interruptions include using perceived resident personality traits or assumptions about "confidence" and motivation to dismiss deficits in clinical performance or justify low ACGME milestone ratings. The BI also identified instances where critiques of performance were solely negative, overlooking positive feedback. Additionally, the BI noted when extraneous assessments (e.g. formative simulation) or non-clinical information may have influenced CCC evaluation inappropriately. Future directions include identifying trends based on resident or BI identity characteristics and examining the frequency of milestone adjustments following BI intervention. This intervention suggests that incorporation of a BI into CCC meetings can be easily implemented by residency programs with potential for immediate impact on resident assessment.

## 16 Evaluating Health Equity Education in Emergency Medicine Residencies

*Tamara Duclaire, Theresa Schroeder Hageman*

**Background:** The ACGME's 2012 CLER program aimed to improve patient care by equipping residents to address healthcare disparities. By 2018, however, many institutions had not implemented these strategies.

**Objectives:** This study evaluates U.S. emergency medicine residency programs for health equity training, including topics taught, teaching methods, and perceived barriers. We hypothesize limited curricula, a lecture preference, and barriers, including lack of time and funding.

**Methods:** In 2023, an observational survey was distributed to U.S. program directors via CORD and direct e-mail, with four participation reminders. Directors were also asked to classify their programs as community, university, or county.

**Results:** Of 281 directors, 35 responded (12%). Among these, 57% were university, 37% community, and 5% county programs. Overall, 91% included health equity training, covering Social Determinants of Health (97%), sexual orientation and gender identity (82%), and race/racism (76%). University programs more frequently covered sexual orientation and gender identity. Fifty-two percent reported barriers, primarily limited curriculum space (67%) and lack of faculty trained faculty (39%).

**Conclusion:** Most respondents include health equity training in their programs, with common topics on social determinants, gender, and race. University programs show broader topic inclusion. Limited curriculum space and lack of trained faculty are the main barriers. A low response rate may impact generalizability.