**Image 1.** Deliverable examples from the Fine Arts and Medicine electives.

generalizable to other residency programs and the self-directed format is engaging and mobile. Emergency medicine residency programs should consider offering electives in the medical humanities to improve empathy, communication, observation, and decrease burnout in their residents.

## 26 Multimodal Rural Emergency Medicine Curriculum: Preparing Residents for Rural Practice

*Ashley Weisman, Richard Bounds, Skyler Lentz*

**Background:** Rural regions face EM physician shortages. Most training programs are located in cities and lack rural clinical experiences, didactics, and mentorship to excite and prepare residents for rural EM practice. There is limited data on optimal training methods to prepare residents for rural practice.

**Educational Objectives:** 1) Provide a multimodal rural EM curriculum that prepares trainees to work in rural EDs. 2) Evaluate our program quantitatively and qualitatively to assess the opportunities and limitations of rural training.

**Curricular Design:** Our rural EM faculty working group, with extensive experience in rural practice, developed this curriculum based on 2 years of weekly case review from 2 rural critical access hospitals (CAHs). This 3-year program features clinical rotations, lectures, and simulation training. Rotations take place at rural CAHs and remote indigenous hospitals. Lectures and simulation focus on skills required in resource-limited solo practice, such as ventilator management, critical medication mixing, obstetric emergencies, patient transfer logistics, leveraging telemedicine, and prolonged critical care when transport is unavailable.

**Impact:** During each resident's elective, quantitative data on patient volume, acuity, and procedures is collected; each rotation concludes with a qualitative evaluation of new skills, unique experiences, and limitations. Our rural EM curriculum has proven successful over the first 2 years. Quantitatively, residents see patient acuity and procedures similar to academic center rotations but gain unique skills from the challenges of a rural environment. Qualitatively, 7 of 7 residents gained new skills and confidence, with 86% choosing a rural practice. We plan to expand our program, share didactic content with other residencies, and open additional rural clinical experiences to trainees nationwide, with the goal of bridging the gap between urban training programs and rural emergency care needs.

## 27 Multiple Casualty Simulation Scenario Secondary to Natural Disaster at a Music Festival

*Shayne Gue, Casey McGillicuddy, Robert Pell, Stephanie Cohen, Andrew Bobbett, Ariel Vera, Tracy MacIntosh, Latha Ganti*

**Introduction:** Communication plays a significant role in medicine, especially in the emergency department. Using simulation will teach learners how to actively listen, delegate roles, and effectively engage with the entire team despite the continuous distractions. This simulation adds innovative value as the elected team leader is blind folded and therefore must rely solely on team member communication to effectively triage, manage, consult, and appropriately determine the patient's disposition.

**Objective:** To assess the effectiveness of team communication towards triage, assessment, and management of multiple trauma patients during a mass casualty simulation (MCI) and develop confidence for future real-life applications.

**Curricular Design:** Learners will begin in a group and should assign roles amongst themselves to manage a critical pediatric patient during a shift in the emergency department. During a simulated earthquake, the team leader is affected by dust and is blindfolded for the rest of the scenario. Three patients will arrive with various traumatic injuries from a nearby music festival. The team will need to quickly assess, stabilize, treat, and disposition these patients appropriately for immediate surgical intervention. During the debrief, the blindfolded team leader should be asked to explain their understanding of each patient's clinical course which can be compared to the non-blindfolded team members in order to determine the accuracy of communication between the team during the MCI. To assess the utility of this project, a pre and post questionnaire to evaluate their knowledge, confidence, and engagement was obtained.

**Effectiveness:** Table 1 shows the post-tests had significantly higher knowledge scores than the pre-test, $t(48)=-4.64$, $p<0.05$. Image 1 demonstrates there was a significantly greater confidence in their ability to handle an MCI in the post than the pre-test, Mann-Whitney $U = 227$, $p<0.05$.

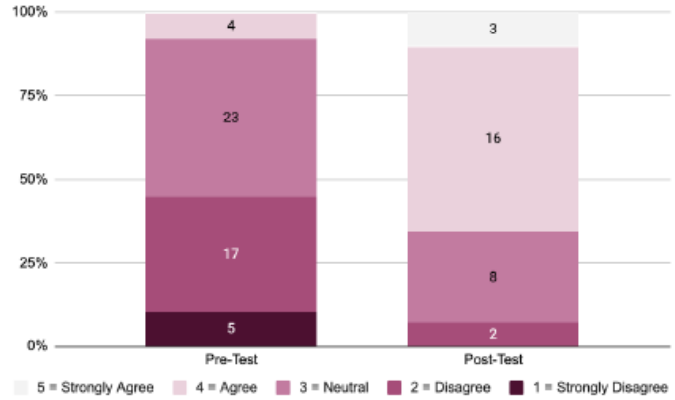


**Image 1.** Frequency counts to the Likert-scale "I am confident in my ability to handle an incident such as this" before and after MCI simulation.

Table 1. Mean MCI knowledge scores for participants before and after their MCI simulation by education level.

| | Pre-Test | | Post-Test | | |
|---|---|---|---|---|---|
| | Mean (SD) | N | Mean (SD) | N | p-value |
| Medical Students | 31% (0.15) | 19 | 60% (0.19) | 10 | <0.05* |
| PGY-1 | 54% (0.23) | 12 | 68% (0.19) | 9 | 0.07 |
| PGY-2 | 60% (0.20) | 10 | 80% (0.18) | 7 | <0.05* |
| PGY-3 | 57% (0.13) | 8 | 81% (0.22) | 3 | <0.05* |
| Total | 47% (0.22) | 49 | 69% (0.20) | 29 | <0.05* |

*Statistical significance at p<0.05

## 28 Novel Approach to Quality Improvement and Patient Safety Education for Emergency Medicine Residents

*Nicole Vuong, Ayanna Walker, Shayne Gue, Stephanie Cohen, Latha Ganti*

**Introduction:** Patient safety has become a national topic since a 1999 Institute of Medicine report estimated that medical errors kill almost 100,000 people per year. Education of the emergency physician would not be complete without a robust curriculum dedicated to this topic.

**Learning Objective:** Our goal was to create a novel curriculum introducing EM residents to the importance of quality improvement and patient safety in today's healthcare marketplace with a focus on experiential learning.

**Curricular Design:** We designed and delivered an 18-month Quality Improvement curriculum through multiple educational strategies. Emphasis was placed on experiential learning which included: 1) Project teams consisting of faculty and resident members who work collaboratively on projects using the PDSA methods. Projects are presented at Hospital Quality Council meetings and regional/national quality conferences. 2) DEMQC (Dept of Emergency Medicine Quality Committee), a monthly workgroup of PGY-3 residents, who identify and execute QI initiatives in our ED in a timely/efficient manner. 3) Participation in various hospital committees to recognize and appreciate the importance of ongoing QI and patient safety initiatives, as well as serving in a liaison role to keep ED staff informed.

**Impact/Effectiveness:** Since implementation, there have been 20 QI projects completed, with 3 ongoing, by 49 (100%) of our residents. These projects have been disseminated broadly through abstracts/presentations/publications on the local, regional, and national levels. Some lasting examples include: decreased CAUTIs after education on foley placement in the ED; utilization of airway checklists; and the impact of onboarding education for off-service rotators.

## 29 Population Health in the Emergency Department - Creation of an M4 Elective

*Madeline Kenzie, Sehr Khan, Taylor Sonnenberg, Ashley Pavlic*

**Introduction:** In July 2020, ACGME's common program requirements were updated to include population health training and competency. Beginning training during medical school for students pursuing emergency medicine will allow future trainees a head start at gaining skills and awareness surrounding social determinants of health and community engagement. There is wide variety in undergraduate medical education pedagogy but a demonstrated growing interest nationally regarding population health training.

**Educational Objectives:** To create an interdisciplinary, multimodal course focused on addressing population health topics with an emphasis on community involvement. This curriculum will target M4s with varying specialty interests who elect to participate in the elective.

**Curricular Design:** EM residents and faculty were involved in curating a curriculum for M4s. A four week curriculum was divided into four main topics: introductory discussion, homelessness/poverty, victims of violence, and mental health. The course focused on incorporating non-traditional methods including site visits, shadowing experiences, and patient panels to supplement background reading and video material. Surveys were given to students at the end of the rotation for feedback.

**Impact/Effectiveness:** Students in their post-curriculum survey expressed appreciation. Notably, experiences with videos, book chapters and conversations with community stakeholders were rewarding for the students. Their reflections suggested that these experiences will impact their future interactions with vulnerable patient populations. The population health elective was continued on for the following year and is scheduled to occur again this upcoming year. Limitation of our evaluation is the bias of participant self-