expressions. Each group then reviewed the alternative video and completed a final survey on their overall thoughts comparing HoloLens to the third-person POV camera.

**Results**: Each participant was able to view their encounter from the augmented reality and third-person perspective and completed a final survey: 84% (16/19) marked the HoloLens footage as "more informative" vs the third-person camera. Many of the students' reviews of the experience included descriptions of evaluating body language and facial expression with patients and seeing their mannerisms from a new perspective. 15/19 participants noted in their free response that the HoloLens was better than the third-party perspective for facial expressions, eye contact, and seeing from the patient's perspective. The third-person perspective was better for overall body language. One student stated that "It was great to see myself from the patient's perspective (HoloLens) and see the importance of body language and facial expressions." Other notable quotes regarding the HoloLens included "HoloLens helped me empathize better with the patient"; and "The HoloLens footage gave me a more detailed look into my facial expressions and how I was translating empathy through small acts of non-verbal communication (eyebrow raise, eye contact)." All 20 students stated that they felt the experience was valuable to their clinical practice, that they would participate in a study like this again and would recommend the session to a colleague.

**Conclusion**: This pilot study provided strong beneficial evidence to using augmented reality in medical communication training. The overwhelmingly positive reviews suggest that using augmented reality video feedback during SP encounters is an important supplement to traditional education and allows MSs to experience what it is like to be in a patient's shoes.

**References**: 1. Buller MK, Buller DB. Physicians' communication style and patient satisfaction. *J Health Soc Behav*. 1987;28(4):375-388. 2. Hannawa AF. "Explicitly implicit": examining the importance of physician nonverbal involvement during error disclosures. *Swiss Med Wkly*. 2012;142:w13576. Published 2012 May 9. doi:10.4414/smw.2012.13576. 3. Kyaw BM, Posadzki P, Paddock S et al. Effectiveness of digital education on communication skills among medical students: systematic review and meta-analysis by the digital health education collaboration. *J Med Internet Res*. 2019;21(8):e12967. Published 2019 Aug 27. doi:10.2196/12967

## 14 (O-E2) Buprenorphine Initiation for Opioid Use Disorder in the Emergency Department: Impact on Patient Outcomes in at a Community Hospital

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Oral Presenter: Hrant Gevorgian, MD, MPH

**Objectives**: To investigate the impact of emergency department (ED)-initiated buprenorphine in comparison to current standard of care on various patient outcomes. The current standard of care will constitute the retrospective variable of the study while the ED-initiated buprenorphine protocol will constitute the prospective variable.

**Background**: Buprenorphine has been shown to be safe and effective in preventing withdrawal symptoms of opioid use disorder (OUD) and subsequent relapse into uncontrolled substance use. No standardized protocol currently exists for the treatment of OUD in the ED, and management has traditionally been at the discretion of the physician. This study examines the initiation of a department-based protocol based on a documented Clinical Opiate Withdrawal Scale (COWS) score of prescribing buprenorphine in the eligible population and following patient outcomes over a short-term interval (30 days from enrollment).

**Methods**: This is a single-center, cohort study set up with two phases: a retrospective phase that consisted of review of standard of care patients from October 2020–January 2021, and a prospective phase where an ED-initiated buprenorphine protocol was implemented from October 2021–January 2022. The inclusion criteria for the buprenorphine protocol included the following: patients ≥18 years of age who meet *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* criteria for OUD, patients seeking outpatient detoxification treatment with buprenorphine, and patients who were offered peer recovery program (PRP) services. Exclusion criteria included medical or psychiatric conditions requiring hospitalization; patients actively participating in methadone maintenance program; and history of allergic reactions to buprenorphine. The primary outcome evaluated was readmission to the ED for OUD within 30 days of initial discharge. The secondary outcomes included admission to

an outpatient treatment program through the facilitation of PRP, readmission to the ED for opioid-involved overdoses requiring naloxone administration, readmission to the ED for any reason, acceptance of PRP recovery specialist services, acceptance of PRP patient navigator services, and follow-up with the PRP.

**Results**: There were 85 total patients of similar race, gender, age, and drug of abuse enrolled in this study. The primary outcome of readmission to the ED for OUD within 30 days of initial discharge was 15% in the retrospective phase and 5% in the prospective phase, *P*=0.17. In the secondary outcomes, 9% of patients had admission to an outpatient treatment program vs 17% in the prospective phase, *P*=0.32. In the retrospective group 98% of patients accepted PRP services compared to 90%, *P*=0.17. In the retrospective group, 25% of patients accepted PRP patient navigator services vs 44%, *P*=0.11. The retrospective group included 13% of patients involved in an overdose requiring naloxone administration vs 0%, *P*=0.03. The retrospective group had 35% of patients with readmission to the ED for any reason vs 13% of patients, *P*=0.18. Additionally, 41% of patients in the retrospective group followed up with the PRP vs 44% in the prospective group with a *P*=1.00.

**Conclusion:** The ED-initiated buprenorphine protocol led to a reduction in readmissions for any reason, readmission for OUD, and overdoses requiring naloxone. There was an increase in admissions to an outpatient treatment program through PRP facilitation, and acceptance of PRP services. Limitations and low adherence rate may influence results. The next steps include continued enrollment, re-education on protocol, and monitoring long-term outcomes.

## 15 (O-D1) Simulation-based Assessment for the Emergency Medicine Milestones

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Oral Presenter: Afrah A. Ali, MBBS

**Objectives**: The purpose of this study is to identify the Accreditation Council for Graduate Medical Education (ACGME) milestones that are the most difficult to assess using traditional methodology and the most suitable milestones to be assessed using simulation.

**Background**: The ACGME recently revised the educational milestones for all accredited residencies programs. The Emergency Medicine (EM) Milestones 2.0 contains updated specialty-specific, competency-based behavioral anchors for the assessment of residents. Most programs use their current assessment methods to fulfill data points for these milestones subcompetencies rather than devise new tools. This has resulted in subcompetencies that are difficult to assess using traditional methods. Simulation-based medical education (SBME) measures outcomes based on observational rating, while providing opportunities for formative and summative feedback that can be used as an alternative solution.

**Methods**: This is a survey-based study that was targeted toward EM residency programs with simulation fellowship affiliation. The web-based survey contained 12 key questions, which focused on demographics of the program, the educational role of the respondents, frequency and type of simulation used in the program, the most difficult to assess education milestones using traditional assessment methods and most suitable milestones for using simulation-based assessment. The survey was conducted using SurveyMonkey and was sent weekly for six weeks to the program director, associate and assistant program director, and simulation fellowship director who were listed on the program's website. Descriptive statistics were used to analyze the data for demographic data as well as the total number of votes for each of the 22 EM milestones subcompetencies for each question. The outcome variables for each subcompetency included the number of votes for "most difficult to assess using traditional methodologies" and "best assessed using simulation." These were counted from both simulation experts and program directors, for a total of five non-ranked votes per category.

**Results**: Thirty-eight of 115 respondents completed the survey (33% response rate). The milestone that was ranked most difficult to assess using traditional methodologies was Systems-based practice: Quality Improvement. The milestone identified by most respondents as most suitable for assessment using simulation was Patient care: Emergency Stabilization. There was no overlap between the two categories of milestone subcompetencies.

**Conclusion**: System-based practice and reflective practice and commitment to personal growth are difficult to assess using traditional methods. Non-traditional assessment methods as well as innovative use of simulation may be helpful in assessing these subcompetencies.

**Table 1.** Emergency Milestone Sub-competencies Most Suitable to Assess Using Simulation

| Rank | MOST SUITABLE for assessment using a simulation-based assessment tool | Percentage |
|---|---|---|
| 1 | Emergency stabilization (PC1) | 84.38% |
| 2.5 | Performance of a focused history and physical exam (PC2) | 62.50% |
| 2.5 | General approach to procedures (PC3) | 62.50% |
| 4 | Interprofessional and Team Communication (ICS2) | 53.13% |
| 5 | Patient and Family-Centered Communication (ICS1) | 50.00% |

*Abbreviations: ICS, interpersonal and communication skills; PC, patient care.*