

to the patient which could be conducted virtually if deemed suitable. Thereafter, the cohort was tracked for three more months after the last home visit and the visits to the ED and hospital admissions documented for them. During the home visits, other than following up on the medical issues, we would perform medical reconciliation, conduct Advance Care Planning conversations, and attend to social/financial needs by referring them to social workers or community partners where necessary.

**Results:** 284 patients had complete data and were included in the analysis. 90% of the patients were above age 60. The median length of enrolment in the program was five months (0-7 months). Compared to the three-month pre-enrolment period, there was a 47.5% reduction in ED re-attendances during the program enrolment period. The after-effect was also observed whereby there was a further 18% reduction in ED re-attendances at three months post-discharge from the program. Compared to the pre-enrolment period, enrolment in H2H studied three months later resulted in the highest number of ED re-attendance reductions among the groups with three ED visits (8 patients down from 46) and four and above ED visits (6 down from 30).

**Conclusion:** Home visits through a hospital-to-home program can reduce the number of ED re-attendances, and the benefit can still be observed after three months post-discharge from the program.

## 11 (O-G2) Laboratory Testing Is Indicated for Older but Not Younger Emergency Department Psychiatric Patients

John R. Allegra, MD, PhD; Marielle Daclan, MD

Oral Presenter: Barnet Eskin, MD, PhD

**Objectives:** To assess the value of laboratory testing for emergency department (ED) psychiatric patients of different ages by examining the fraction of those patients admitted medically instead of psychiatrically.

**Background:** Previous studies have shown that routine laboratory testing has low yield for identifying unsuspected medical conditions for most ED patients who present for psychiatric problems. About 20% of ED psychiatric patients are over 65 years old, and these patients are more likely to have chronic medical conditions than younger patients. These conditions may worsen during exacerbations of psychiatric illnesses and, in fact, may contribute to these exacerbations. We hypothesize that a larger proportion of elderly than younger patients presenting for psychiatric problems require medical admission, and that the reasons for such admission are exacerbations of chronic medical conditions.

**Methods:** Design: Retrospective cohort. Population: Consecutive ED patients presenting with psychiatric conditions in the years 2019-2021. Setting: Suburban ED with

an annual ED volume of 90,000 patients, an ED residency, and a separate area for psychiatric patients. This area has specialized psychiatric personnel, including psychiatric social workers and psychiatrists. ED healthcare providers initially evaluate the patients and then request psychiatric consultation. Protocol: A database of ED psychiatric patients is maintained by the hospital. We tallied the number of psychiatric visits and the number of these patients admitted for medical conditions. We calculated and plotted the percent admitted medically by decade of life. We also tallied admissions for specific conditions, namely drug-related diagnoses (including alcohol abuse) and dementia.

**Results:** The database contained 8018 patients. The median age was 30 years (interquartile range 19-51); 51% were female. Of these, 175 (2.2%) were admitted for medical conditions. The percent admitted medically varied markedly by decade of life, ranging from an average of <1% in the first four decades of life to 15% in the 10<sup>th</sup> decade. Drug-related diagnoses were found in patients admitted medically in the 3<sup>rd</sup>-8<sup>th</sup> decades of life and accounted for 46% of the medical admissions in the 4<sup>th</sup>-6<sup>th</sup> decades of life. Of medical admissions in the 8<sup>th</sup>-10<sup>th</sup> decades of life, 30% were for dementia.

**Conclusion:** We found a higher admission rate for medical conditions in elderly than younger psychiatric ED patients. Dementia was the most frequent chronic medical condition in elderly patients that was identified as the reason for medical admission. Our results confirm that the routine requirement for laboratory testing in younger psychiatric ED patients is unlikely to be useful.

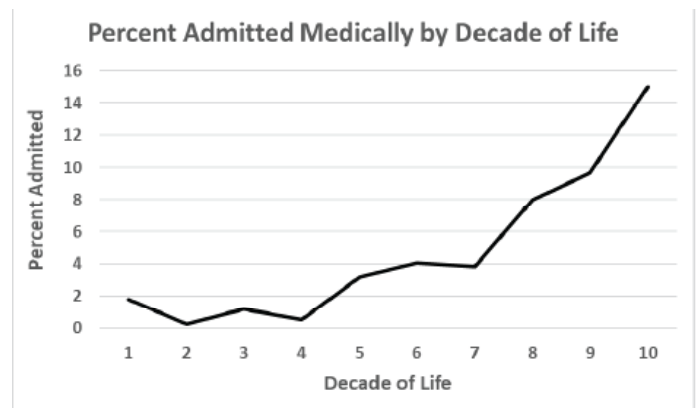


Figure 1. Percent Admitted Medically by Decade of Life

## 12 (O-D4) Impact of an Electronic Format on the Completion of Evaluations of Medical Students in the Emergency Department

Joshua Easter, MD, MSc

**Objectives:** To assess the effect of a novel electronic format on the frequency of evaluations completed by faculty and residents for medical students in the emergency

department (ED).

**Background:** Faculty and residents' assessments of medical students working in the ED play an integral role in helping students improve and in providing input for students' grades and standardized letters of evaluation for their residency applications. Despite the importance of these evaluations, students and clerkship directors often report that they do not receive sufficient evaluations to provide meaningful assessments. The aim of this study was to determine whether an electronic evaluation system would improve the frequency of submitted evaluations and the quantity of information submitted.

**Methods:** This was a prospective observational study at a single academic ED from 2019-2022 with an advanced clerkship elective for senior medical students in emergency medicine and an advanced elective in pediatric emergency medicine. Evaluations were performed utilizing a modified version of the National Clinical Assessment Tool for Medical Students in the Emergency Department. Prior to the intervention, residents and faculty were asked to complete paper evaluations on students after every shift in the ED and submit them to a locked box in the ED. In the beginning of academic year 2020, a new electronic evaluation format for the evaluation was provided as a Google Form. It was accessible by a hyperlink or QR code that was given to all students and posted in the ED. Descriptive and comparative statistics were calculated. A sensitivity analysis was performed to assess the impact of COVID-19 on results.

**Results:** Over the three-year period, 172 students rotated in the ED, and 718 evaluations were submitted. Students worked approximately 2,924 shifts and received submitted evaluations from 22% of these shifts. With the paper format students received a mean of 2.8 (SD 2.1) evaluations for their month-long rotation compared to 5.7 (SD 3.9) evaluations with the electronic format ( $P < 0.001$ ). Resident evaluations increased more than attending evaluations following the implementation of an electronic format; a mean of 2.1 resident evaluations per student using the paper format and 4.1 evaluations using the electronic format ( $P < 0.05$ ). Most electronic evaluations were accessed by the hyperlink (70%), followed by QR code (27%) and direct email (3%). The mean number of discrete comments included via free text on each evaluation increased from a median of 1 (IQR: 0-2) with the paper format to a median of 4 (IQR: 3-5) with the electronic format. A sensitivity analysis with exclusion of data from the 12 months at the height of the COVID-19 pandemic did not reveal any significant changes in the reported associations between the format of the evaluation and the frequency of submission.

**Conclusion:** An electronic format was associated with more frequent submission of ED shift evaluations of medical students and more content in the evaluations. As an observational study there are potentially unmeasured

confounders that may have impacted the results. In addition, while the number of evaluations increased, the quality of the evaluations was not assessed.

## 13 (O-F7) Augmented Reality for Empathy Training: Stepping into the Patient's Shoes

Aaron Frank, MS-3; Melissa Allison, MS-3; Clara Riggle, MS-3; Ronnie Rivera, MD; Ariana Nelson, MD

Oral Presenter: Alisa Wray, MD, MAEd

**Objectives:** The patient-physician relationship and satisfaction are highly reliant on effective physician communication.<sup>1,2</sup> We proposed that by utilizing the Microsoft HoloLens augmented reality to record and watch medical student standardized patient (SP) encounters students would be more empathetic and imagine what it is like to be "in the patient's shoes."

**Background:** Although virtual reality has been widely adopted for training practical skills, virtual and augmented reality are minimally utilized to improve medical students' (MS) empathy skills.<sup>3</sup> Medical students have limited options of reviewing their SP encounters and typically can only view footage from one camera angle. This limited point of view (POV) does not give a representation of eye contact, body language, or communication directly from the patient's POV. We initiated a pilot project utilizing Microsoft HoloLens augmented reality to give students an opportunity to view themselves from the patient's POV. The figurative "putting yourself in the patient's shoes" became literal with digital education.

**Methods:** To analyze the efficacy of augmented reality video, we designed a pilot study that evaluated students' self-perception of their performance immediately before and after watch-back sessions. Twenty MS1s and MS2s were randomly assigned into two groups: those who would review their video footage captured on the HoloLens, and those who would review their video footage captured from a standard camera. Students completed a 5-minute SP encounter, with all SPs wearing the HoloLens during the encounter. Students then completed the Consultation and Relational Empathy (CARE) validated survey, and additional questions evaluating body language, eye contact, and facial expressions. Students assigned to the HoloLens group then had the opportunity to wear the device and experience themselves delivering their 5-minute patient interview in an immersive, augmented-reality experience, from the patient's POV. The other group of students watched the third-person POV of their encounter. After completing the watch-back sessions, students repeated the CARE survey and additional questions, and provided feedback on the experience. Changes in CARE survey scores, evaluation of body language, eye contact, and facial