Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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feedback for behavioral changes, we plan to formally assess for level 3 outcomes in a follow-up survey after July 1, 2021. Anonymous surveys were used for data collection, and statistical analysis was conducted using a percentages independent sample t-test.

Results: The total sample size was 27 self-selected MS-4 students who met inclusion criteria. Learner reactions were overwhelmingly positive, with 100% (27) indicating they would take the course again or recommend it to a friend. Using a TMTL scale, 77% (21) of participants gave a 3 for lecture length, 58% (16) gave a 3 for time commitment (with 42% stating time commitment was too low and 0% too high), and 77% (21) gave a 3 for level of detail the course provided. The average score between the pre (M = 56%, SD = 14) and post-tests (M = 73%, SD = 12) showed a statistically significant improvement (p < 0.0001). Student’s confidence was interpreting ECGs, understanding ECG rhythms, and ability to call a “Code STEMI” all improved (2.59 to 3.59, 2.67 to 3.74, 2.56 to 3.67 respectively; p < 0.0001 for all comparisons). Preliminary behavioral feedback from students following the course included the ability to identify and interpret pathology such as Wellen’s waves, hypothermia, and Wolf-Parkinson-White Syndrome during clinical rotations.

Conclusion: This study demonstrated that virtual teaching is a satisfactory method for medical students to learn ECG interpretation and provides an additional mode that medical educators can use in the future. Learners drastically improved their self-confidence and knowledge with ECG interpretation following participation in a novel, virtual learning curriculum.

157WITHDRAWN

158TrafficickED and TraumatizED: The Effectiveness of a Human Trafficking Seminar in Building Confidence in Trauma-Informed Care
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Study Objectives: Human trafficking is labor or sexual exploitation through the means of fraud or coercion. It is estimated that 87% of trafficked victims encounter a healthcare provider during captivity, however, only about 1% of all hospitals nationwide have policies for treating these patients. We wanted to determine whether an educational seminar would alter confidence levels in identifying trafficked patients and delivering trauma-informed care.

Methods: Hospital faculty and staff at a single urban academic medical center were given the option to register and participate in a 2.5 hour training on red flags of human trafficking led by emergency physicians, social workers, members of a local non-profit agency called Salvation Army STOP-IT, members of local law enforcement and agents of the Federal Bureau of Investigation. Afterwards, a psychiatry attending and medical student taught the principles of trauma-informed care for 1.5 hours. Pre- and post-surveys assessed confidence, measured on a 5-point Likert scale, in detecting red flags and in providing trauma-informed care to trafficked patients. Two sample t-tests were used to compare pre- and post-survey responses.

Results: We received a total of 135 pre-survey responses and 82 post-survey responses. The respondents consisted of registered nurses (40.0%), attending physicians (17.0%), mental health counselors, social workers and case managers (10.3%), resident physicians (8.9%), students (7.4%), patient care technicians (4.4%), clerical or finance coordinators (3.7%), administration (3.0%) and others (5.2%). Comparison of pre- and post-survey Likert scores indicated a statistically significant difference in (a) confidence in discussing human trafficking with patients, (b) confidence in identifying trafficked patients, and (c) confidence in the ability to provide trauma-informed care.

Conclusion: Our results show that dedicated training on red flags and trauma-informed care resulted in a statistically significant difference in confidence level in providing patient-centered care to trafficked patients. Seminar participants made survey suggestions such as making the training accessible to all hospital employees and considering a universal password that would discreetly alert hospital employees about a suspicious situation. Participants mentioned that they would look at institutional protocols proactively and ensure safe dispositions for patients. Future directions include expanding our training to community hospitals and refining our partnerships with all stakeholders, including our in-house SANE (sexual assault nursing examiner) team.

159Modified Early Warning Score (MEWS)-Enhanced Emergency Department Flow Process
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Study Objective: Emergency Department (ED) crowding is a longstanding problem in the US. Admission to the inpatient floors can be a bottleneck in ED patient flow, due to the need for hospitalist assessment of patient clinical stability. Early Warning Systems (EWS) have been proposed that use vital signs to detect early signs of clinical deterioration. We set out to determine whether the use of a modified version of the EWS score (MEWS) could be used to discriminate patients in which ED streamlining admission orders could be placed prior to being seen by the hospitalists—with a goal of improving ED length of stay (LOS) without increasing adverse events.

Methods: We conducted an IRB approved retrospective, observational, cross-sectional analysis of inpatient admissions from the ED at a Level 1 Trauma Center in NE PA with an annual census of approximately 90,000 visits. Subjects were included if they were ≥ 18 yo and admitted to the hospital medicine service. The study design compared a time period prior to implementation to a MEWS-enhanced admission patient flow process (Pre-MEWS: 2/19/2017-2/19/2019) with the post implementation period (Post-MEWS: 2/19/2019-2/19/2020), Post-MEWS implementation, patients with a low MEWS score (0-1) were admitted with an abbreviated order set to expedite the admission process. Those with higher MEWS scores remained in the ED until they were seen by the admiring team. Metrics such as demographics, ED LOS (minutes) and need for a Rapid Response Team (RRT) were collected.

Results: A total of 44,986 admissions occurred; 28,624 (63.63%) were Pre-MEWS while 16, 362 (36.37%) were Post-MEWS. The average patient age was 68.53±17.27 with a younger mean age among those in the Pre-MEWS as compared to Post-MEWS (68.66±17.31 vs 68.30±17.21; p = 0.03). Over half (51.8%) the patients were female with a significant difference; Pre- vs Post-MEWS periods (51.78% vs 51.85%; p = 0.88). The median ED LOS was 371 minutes (Inter-Quartile Range 0[IQR]: 288 to 509) with a statistically significantly shorter median ED LOS in the post-MEWS (358; IQR: 273 to 478) as compared with Pre-MEWS period (379; IQR, 288 to 509). The ED LOS in the post-MEWS did not differ when comparing those with MEWS > 1 (354; IQR, 271 to 476) with MEWS ≤ 1 (346; IQR, 275 to 479) (p = 0.12) while in the Pre-MEWS the ED LOS was significantly longer among those with MEWS ≤ 1 (384[IQR, 292 to 514] vs 372[IQR, 282 to 501]; p = 0.0001). There was total of 681 Rapid Responses events of which 236 (34.65%) were within the first 24 hours of admission (RRT-24hr). When comparing the pre-MEWS to post-MEWS periods there was no significant difference in RRT-24hr (143(53.26%) vs 93(37.05%); p = 0.52).

Conclusion: The use of a modified MEWS enhanced admission process to the hospital medicine service was associated with a significant decrease in ED LOS without a significant increase in adverse outcome as measured by RRT events within 24 hours of admission.

160Home Pulse Oximetry Monitoring for Patients With Suspected COVID-19: A Pilot Assessment of Patient Engagement and Compliance
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Study Objectives: Patients infected with SARS-CoV-2 who are evaluated in the emergency department but well enough to go home are still at risk for clinical deterioration. They may benefit from a program to monitor oxygen levels at home using portable pulse oximeter devices. Our study aims to evaluate patient engagement in and compliance with a home pulse oximetry monitoring program. The results of this study will be important to inform development and operationalization of remote patient monitoring programs.

Methods: This was a single center, prospective pilot study of patients who presented to the ED or urgent care for symptoms consistent with SARS-CoV-2 infection and were considered to have some risk of clinical deterioration and thus could benefit from home SpO2 monitoring. Subjects were given a portable pulse oximeter and diary. They were instructed to perform readings at rest and with exertion twice daily for 14 days. Patients also recorded the presence or absence of symptoms associated with COVID-19 and whether they required additional medical care due to worsening symptoms. Subjects were contacted daily to obtain the recorded data. If contact could not be made in 3 attempts on each of 3 successive days, the subject was considered
lost to follow up. The primary outcome of interest was patient engagement in the program defined as completion of the entire 14-day assessment. Secondary outcomes included patient compliance with performing the SpO2 readings and the proportion of subjects who had worsening clinical status requiring medical evaluation. Patient compliance was calculated as a percentage of completed readings out of the total number of possible readings. The difference in engagement and compliance rates between COVID-positive and COVID-negative patients was calculated using the Pearson Chi-squared test and Mann-Whitney U test, respectively.

Results: Fifty patients were enrolled in the study with 3 screen failures. The remaining 47 were included in the final analysis. All patients received a qualitative test for detection of SARS-CoV-2; 27 (57.4%) patients tested positive. Overall, engagement in the program was 46.8% with no significant difference between COVID-positive and COVID-negative groups (48.15% vs 45%, p = 0.831). Median compliance was 42.9% (IQR 22.22 - 78.57) with compliance of 50.0% (IQR 22.92 - 76.44) for COVID-positive and COVID-negative groups, respectively (p = 0.838). A total of 4 patients required additional medical intervention during the study period. Of those, two sought medical attention after advisement by the study team members due to decreasing SpO2 levels.

Conclusion: Our study demonstrated that there was limited engagement and compliance in a 14-day home pulse oximetry monitoring program. A positive SARS-CoV-2 test did not predict a higher likelihood of engagement or compliance. Our program was helpful in detecting worsening SpO2 levels in two patients who sought medical care and were admitted for further management. These results support the use of home pulse oximetry monitoring; however, design of programs should focus on increasing patient engagement and compliance.

161 Community Based Prehospital Care Project: Providing a Low-Barrier-to-Access Care Model for Those Experiencing Homelessness in an Urban Environment

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Study Objectives: Homelessness is a critical public health problem affecting more than half a million people in the US. It is associated with an increased incidence of chronic illness, morbidity and mortality rates. As those experiencing homelessness frequently lack access to primary care (PCP) and health insurance, the emergency department (ED) is often a primary source of care, resulting in increased healthcare costs over time. In an effort to improve primary care access and decrease costs, we implemented a low barrier-to-access care model where specialty-trained, municipal out-of-hospital-based providers were deployed to our city’s primary homeless shelter to provide basic, protocolized care and resources to shelter users. The aims of this study were to: 1) describe the characteristics of the population served and services provided, 2) assess program influence on the proportion of patients with PCPs over time, and on 3) the proportion of patients transported to the ED over time.

Methods: We conducted a retrospective review of data collected in a prospective, observational manner. Community based out-of-hospital providers entered visit-level data for each patient encounter conducted at the city’s primary homeless shelter using a standardized database. Data elements included demographics, special population status (Veteran, LGBTQ+), payor type, access to primary care, chief complaint, interventions, and whether the patient was transported to the ED. Descriptive statistics summarize patient visit, and intervention characteristics. Binary logistic regression modeling was used to assess changes in primary care access and ED transfer over time.

Results: During the study period, there were 1091 encounters; 210 in 2017 (26 encounters/mo) and 492 in 2019 (41 encounters/mo) a 134% increase over a 3-year period. 54% (n = 204) were male, 1% (n = 11) identified as transgender; 89% (n = 967) were white; 99% (n = 1077) were non-Hispanic. 95% (n = 1038) of visits were for patients currently experiencing homelessness while 5% (n = 53) were unstable housed. Most patients (73%, n = 807) had comorbidities. Interventions most often included general wellness assessments (56%, n = 606) and medication administration (60%, n = 634). Logistic regression modeling revealed a significant increase in the proportion of patients with a PCP over time (55% year one, 74% year 4; OR = 1.556, 95% CE: 1.326-1.825, p < 0.001); while the proportion transported to the ED did not significantly change (10% year 1, 9% year 4; OR = 0.852, 95% CE: 0.600-1.055, p = 0.139).

Conclusion: This program was able to serve and treat an expanding number of patients experiencing homelessness or unstable housing situations in a convenient, accessible setting, potentially averting expensive ED visits for routine, non-emergent issues. Patients seen had a range of high-risk and complex comorbidities. Overall, the program was effective in connecting an expanding number of patients with primary care and providing many basic services over time.

Table 1. Demographic and visit characteristics for community paramedicine visits during the study period.

| Characteristic                          | Year 1 (n = 204) | Year 4 (n = 492) | p-value |
|----------------------------------------|------------------|------------------|---------|
| Gender Identity, n (%)                 | Male             | Female           |         |
|                                        | 580 (54)         | 464 (45)         |         |
| Race, n (%)                            | White            | Black or African American | Asian | Natve Hawaiian/Pacific Islander | Unknown | 967 (99) | 97 (9) | 6 (0.5) | (0.5) | 14 (1.3) |
|                                        | 53 (15)          | 59 (12)          |         |
| Ethnicity, n (%)                       | Hispanic         | Non-Hispanic     |         |
|                                        | 12 (1.3)         | 1,077 (99)       |         |
| Special Population*, n (%)             | Experience homeless | LGBTQ | Veteran | Pregnant | None identified | 1,018 (95) | 30 (3) | 111 (11) | 48 (4) |
|                                        | 30 (3)           | 3 (0.3)          |         |
| Past Medical History*, n (%)           | Substance Use Disorder | Mental Health Diagnosis | 309 (29) | 284 (27) | 1,058 (97) | 14 (1.4) | 98 (9) | 98 (9) | 71 (7) | 33 (3) | 15 (1.5) | 5 (0.5) | 2 (0.2) | 1 (0.1) |
|                                        | 2 (0.2)          | 28 (2.8)         |         |
| Location of Encounters, n (%)          | Primary Shelter  | Homeless Resource Center | Other Location | Needle Exchange Program | Shelter affiliated Apartments for Unstably Housed | 1,058 (97) | 12 (1.2) | 1 (0.1) | 1 (0.1) | 0.0 |
|                                        | 20 (10)          | 1 (0.1)          |         |
| Payor Type, n (%)                      | Public           | None             | Unknown | 151 (144) | 23 (2) | 919 (84) |
|                                        | 151 (144)        | 23 (2)           |         |
| Community Paramedic Interventions*, n (%) | General Wellness Check | Medication Provided | Chronic Disease Discussion | Emotional First Aid | Overdose Prevention Education | Tobacco Cessation | SBIRT | Hands Only CPR | 2020 (12 calendar months), n = 204 | 2019 (12 calendar months), n = 461 | 2018 (12 calendar months), n = 249 | 2017 (12 calendar months), n = 176 |
|                                        | 634 (60)         | 634 (60)         | 93 (9)  | 61 (6) | 56 (5) | 3 (0.3) | 2 (0.2) | 1 (0.1) | 2020 (12 calendar months), n = 204 | 2019 (12 calendar months), n = 461 | 2018 (12 calendar months), n = 249 | 2017 (12 calendar months), n = 176 |
|                                        | 634 (60)         | 634 (60)         | 93 (9)  | 61 (6) | 56 (5) | 3 (0.3) | 2 (0.2) | 1 (0.1) |
|                                        | 2020 (12 calendar months), n = 204 | 2019 (12 calendar months), n = 461 | 2018 (12 calendar months), n = 249 | 2017 (12 calendar months), n = 176 |
|                                        | 12 (1)           | 12 (1)           |         |
| Transported to Emergency Department*, n (%) | 2020 (12 calendar months), n = 204 | 2019 (12 calendar months), n = 461 | 2018 (12 calendar months), n = 249 | 2017 (12 calendar months), n = 176 |
|                                        | 1,058 (97)       | 1,058 (97)       | 1,058 (97) | 1,058 (97) | 919 (84) | 1,018 (95) | 30 (3) | 111 (11) | 48 (4) |
|                                        | 53 (15)          | 53 (15)          |         |
| Notes: SDMT = sedation, gas (non-invasive), transport, squeeze/rescue bag, CPRD = chronic obstructive pulmonary disease; HIV = human immunodeficiency virus; SBIRT = screening, brief intervention and referral to treatment; * = may not sum to 100% as patients could have more than one; † = does not sum to 100% as data were not available for all encounters.