32 Gender in Emergency Medicine Residency

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Learning Objectives: The purpose of this study is to investigate both the gender composition of EM residency leadership and to determine if more female residency leaders begets more female residents.

Background: It is estimated that 33% of academic EM physicians are women. However, there are no published data describing the representation of women in EM residency leadership positions.

Objectives: The purpose of this study is to investigate both the gender composition of EM residency leadership and to determine if more female residency leaders begets more female residents. It was hypothesized that there would be minority number of women in leadership positions, and that residency programs with more women in leadership will have more female residents.

Methods: Residency leadership and residents were determined by accessing each residency's website, or by contacting the program coordinator. Gender was determined via listed pronouns, or by first name and photographic masculine or feminine cues. Of the 268 EM programs, data was collected on leadership for 248 (93%), residents for 209 (78%), and chief residents for 77 (29%).

Results: Women comprised 40% of leadership: 31% of program directors (PD), 42% of associate PDs, and 48% of assistant PDs. 36% of residents and 48% of chief residents were women. Through multivariate correlation analysis, percentage of female residents was found to be most strongly correlated with female assistant PDs. Women comprised 34% of overall residency leadership and 25% of PDs in the south, 43% and 33% in the midwest, 44% and 28% in the northeast, and 45% and 44% in the west. The differences did not reach statistical significance overall, however, there were less female PDs in the south.

Conclusions: Women are not highly represented in top EM residency leadership positions, but become more prevalent in junior positions. Residency programs were found to have a larger percentage of female residents when an assistant PD is a woman. While not statistically significant overall, it was striking that there were regional differences in gender of leadership, and that there were less female PDs in the southern region.

33 Google Translate versus Doctors: Who prepares better discharge instructions?

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Learning Objectives: This study compared the accuracy of ED discharge instructions compare by native Spanish and Haitian Creole speakers compared to those prepared by a free, widely available machine learning translation tool (Google Translate).

Background: Medical students and residents are often required to care for patients with limited English proficiency but little guidance exists on the best way to prepare written discharge instructions (DCIs) in the patient's language. Consequently, some learners resort to unvalidated tools such as Google Translate (GT) to generate DCIs.

Objectives: It was hypothesized that if DCIs are translated from English to Spanish or Haitian Creole using human translators (HT) versus GT, the HT DCIs will (1) contain fewer errors and (2) be preferable to native speakers.

Methods: 211 DCIs were translated by blinded physicians who are native speakers or certified translators of Spanish or Creole. In Part 1 of the study, two Spanish-speaking and one Creole-speaking physicians who were not involved in data collection or HT reviewed the DCIs in English and evaluated errors in the HT and GT translations. In Part 2, the reviewers ranked HT and GT based on the accuracy and readability of the translations.

Results: In Part 1, the Spanish GT DCIs had more errors than HT (634 and 399 for GT versus 299 and 284 for HT), however, this difference was not statistically significant (k=0.47). Creole GT DCIs had more errors than HT (1720 for GT and 490 for HT). In Part 2, the Spanish reviewers preferred HT (82.0% and 77.9%); the Creole reviewer preferred the HT (93.3%). Notably, the Spanish GT DCIs, unlike the HT DCIs, included errors that would cause patients to miss follow-up care and overdose on medication. Moreover, many basic medical terms including "primary care doctor" and "sutures," produced nonsensical translations using GT in Creole.

Conclusions: The data suggests that HT DCIs had fewer errors than GT. Moreover, HT DCIs were preferred by reviewers for both languages. More importantly, GT may provide unintelligible or potentially harmful translations. Therefore, clinicians must remain vigilant of the potential risks of tools such as GT.

34 Hypoglycemia after Insulin for Hyperkalemia in Hemodialysis Patients

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Learning Objectives: To determine the risk factors for development of hypoglycemia, after administration of IV insulin, for the treatment of hyperkalemia, in patients requiring hemodialysis.

Background: Hyperkalemia is a common life-threatening complication in patients with end-stage renal disease (ESRD) requiring hemodialysis (HD). Acute treatment involves IV insulin, though this can lead to hypoglycemia (HG).

Objectives: To determine risk factors for developing HG in ESRD patients treated with IV insulin for hyperkalemia in the ED. Methods: A retrospective chart review from January 1, 2014, to January 1, 2019, was conducted to find ESRD patients requiring HD who developed HG (defined as glucose ≤ 70 mg/dL) following the administration of IV insulin for the treatment of hyperkalemia in the ED. Demographics, laboratory values, insulin and dextrose doses, and the lowest glucose within six hours of insulin administration were collected. Patients were excluded from the study if they did not have a repeat glucose within six hours of insulin administration, did not have a glucose ≤ 70 mg/dL, or were < 18 years old.

Results: Of the 128 patients who had a BG check within six hours of insulin therapy for hyperkalemia, 54 patients developed HG of which 16 had severe HG (defined as BG ≤ 40 mg/dL). A majority of patients were insulin naïve (83%) with only ten patients having a past medical history of diabetes. The average initial blood glucose of patients with HG and severe HG was 87 and 86, respectively. 63% of patients received 10 units of IV insulin, with 31% receiving 5 units. 76% of patients received 25 grams dextrose, with 20% receiving 50-75 grams, and 4% not requiring any dextrose. Conclusions: We find the incidence of HG after treatment with IV insulin occurred at three times the rate previously identified in a non-HD dependent population. The risk factors identified here align with previous studies identifying insulin dose and being insulin naïve being associated with HG. Baseline blood glucose levels in this study were higher than those in previous studies, implying that HD dependent patients may be at risk for HG despite their initial glucose reading.

35 Improving Staff Attitudes Towards Patients Presenting to the Emergency Department with Opioid Use Disorder: Is An Online Module Enough?

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Learning Objectives: 1) Characterize bias towards patients with OUD across staff members in an academic ED in Philadelphia, an epicenter of the opioid epidemic. 2) Determine the effectiveness of an online module in changing staff attitudes towards patients with OUD.

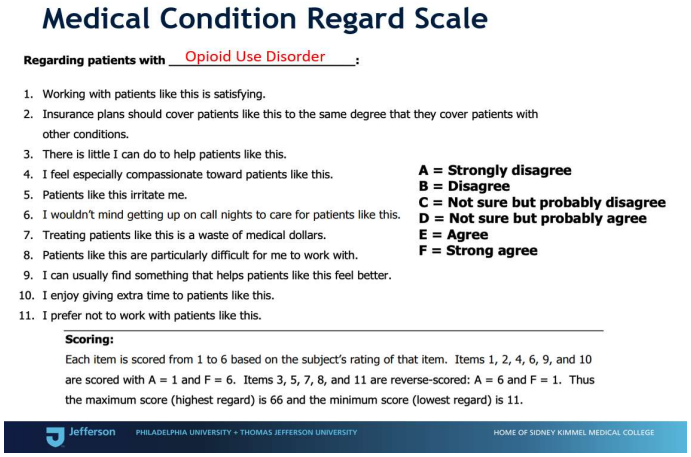
Background: Significant stigma surrounds patients with opioid use disorder (OUD). This stigma repeatedly follows patients into the ED and negatively influences care. All ED staff impact the patient journey in the ED and the success with which OUD patients receive a warm handoff to a recovery organization.

Objectives: The authors sought to: 1) characterize bias towards patients with OUD across all staff members in an academic ED in Philadelphia, an epicenter of the opioid epidemic; and 2) determine the effectiveness of an online module in changing staff attitudes towards patients with OUD. We hypothesized that an online module may serve as a useful tool in changing staff attitudes towards patients with OUD.

Methods: The authors developed and deployed a survey to 463 ED clinical and non-clinical staff members through Qualtrics. The survey was informed by the validated Medical Condition Regard Scale (MCRS) to capture staff sentiments towards patients with OUD (Figure 1). Respondents were subsequently directed to an online Articulate Rise module that provided training on trauma-informed approaches to caring for patients with OUD. Continuing education credit was offered. Upon module completion, respondents received a follow-up survey 1 month later to assess knowledge retention and detect changes in reported attitudes.

Results: Results are in progress. 181 staff completed the pre-survey, module, and post-survey (response rate 40%). Preliminary data shows that across all job types surveyed, change in MCRS score did not significantly change after completion of the module (Figure 1).

Conclusions: Preliminary data suggests that an online module to train ED staff on trauma-informed care is not an effective tool to change attitudes towards patients with OUD. As the epidemic continues to escalate, educators will need to identify more effective methods to engage staff members in order to improve outcomes of patients with OUD who present to the ED.


Medical Condition Regard Scale

Regarding patients with Opioid Use Disorder:

1. Working with patients like this is satisfying.
2. Insurance plans should cover patients like this to the same degree that they cover patients with other conditions.
3. There is little I can do to help patients like this.
4. I feel especially compassionate toward patients like this.
5. Patients like this irritate me.
6. I wouldn't mind getting up on call nights to care for patients like this.
7. Treating patients like this is a waste of medical dollars.
8. Patients like this are particularly difficult for me to work with.
9. I can usually find something that helps patients like this feel better.
10. I enjoy giving extra time to patients like this.
11. I prefer not to work with patients like this.

A = Strongly disagree
B = Disagree
C = Not sure but probably disagree
D = Not sure but probably agree
E = Agree
F = Strong agree

Scoring:
Each item is scored from 1 to 6 based on the subject's rating of that item. Items 1, 2, 4, 6, 9, and 10 are scored with A = 1 and F = 6. Items 3, 5, 7, 8, and 11 are reverse-scored: A = 6 and F = 1. Thus the maximum score (highest regard) is 66 and the minimum score (lowest regard) is 11.

Jefferson PHILADELPHIA UNIVERSITY + THOMAS JEFFERSON UNIVERSITY HOME OF SIDNEY KIMMEL MEDICAL COLLEGE

Figure 1. The Medical Condition Regard Scale.

36 Incorporating a Resident-Driven Mentorship Program into Emergency Medicine Clerkship Rotations

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Learning Objectives: Goal of this study is to determine