Accreditation Council for
Graduate Medical Education

Abstracts

2023 MEANING IN MEDICINE

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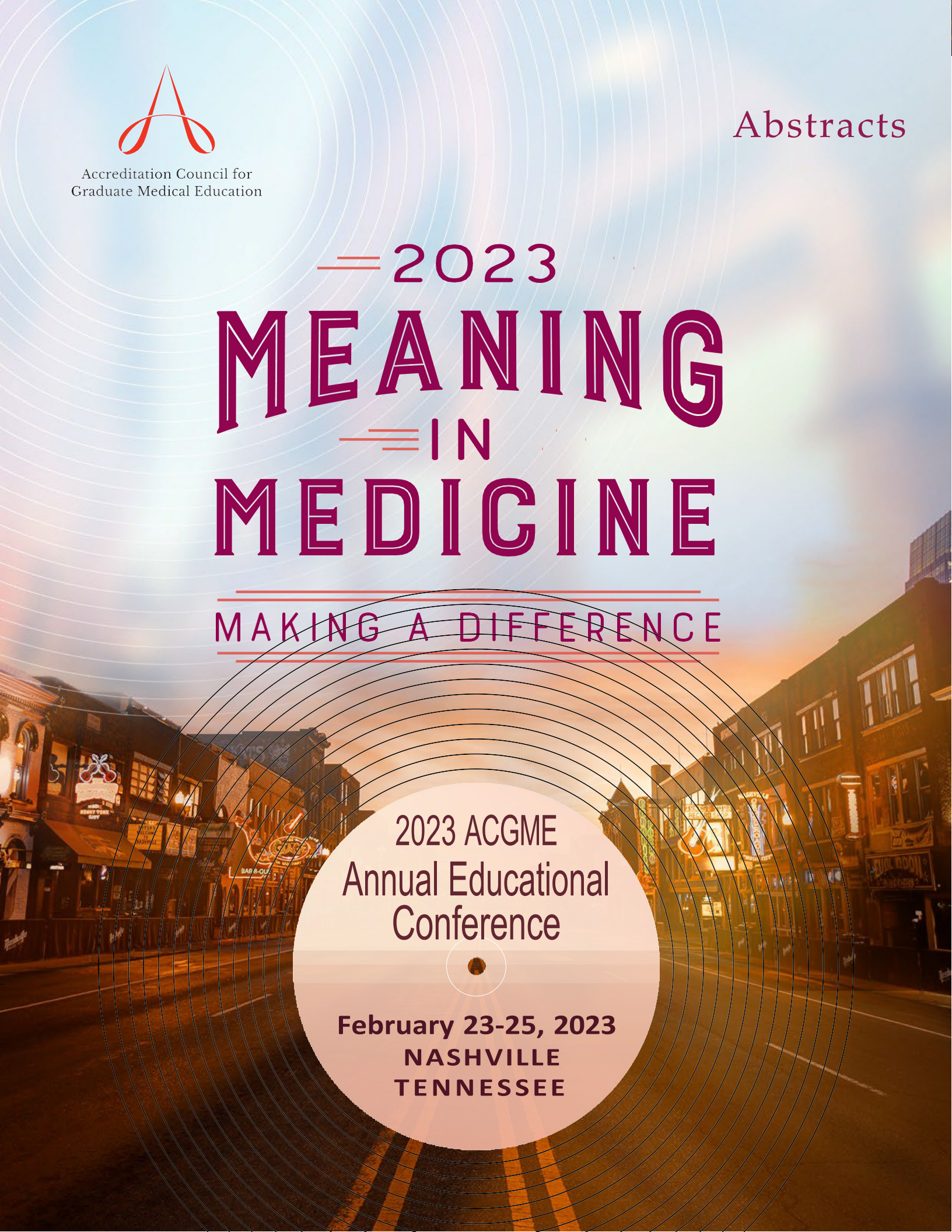

2023 ACGME
Annual Educational
Conference

February 23-25, 2023
NASHVILLE
TENNESSEE

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2023 ACGME Annual Educational Conference Poster Hall

Abstracts displayed in the 2023 ACGME Annual Educational Conference Poster Hall were selected from the 2023 Call for Abstracts. The abstracts represent research and innovations within graduate medical education (GME).

Research Abstracts include completed studies or investigations, with measurable results, that offer new conclusions that contribute to GME research and practice.

Innovation Abstracts include completed programs, projects, or strategies, with measurable results, that share best practices and practical insights with the GME community.

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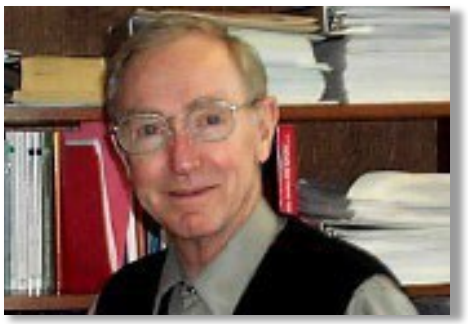
2023 ACGME Annual Educational Conference

Marvin R. Dunn Poster Hall



Marvin R. Dunn, MD

The ACGME lost a beloved colleague and friend with the death of Dr. Marvin R. Dunn on July 30, 2003. Dr. Dunn, 71, was the ACGME's Director of Review Committee Activities, as well as a nationally renowned figure in the medical community.

In 1998, the ACGME was fortunate to have Dr. Dunn join its staff. He brought vast experience, deep wisdom, an unfailing sense of humor, and the capacity to see goodness in each of us. His concern for residents was unfailing. He is greatly missed.

As the ACGME developed clinical work and education hour standards and moved to a competency-based method of evaluating residents and fellows, Dr. Dunn always kept the impact on the learner at the forefront. He had a deep respect for the role of the Review Committees in strengthening the formation of physician learners, and kept the Review Committees and the ACGME on task to improve the quality of life for residents and fellows.

Colleagues and friends across the country contacted the ACGME with memories of Dr. Dunn when he passed. In their letters of condolence, he was remembered over and over again with phrases such as, "a true advocate for excellence in medical education," "the most wonderful combination of wisdom and humor," "wise counsel and gentle style," and "truly one of the good people."

During his distinguished career, Dr. Dunn, a native of Lubbock, Texas, and a board-certified pathologist, held a series of prominent positions. Before joining the ACGME, he served as the AMA's Director of Graduate Medical Education. Earlier in his career he served as Vice President for Health Sciences and Dean of the University of South Florida College of Medicine, Dean of the University of Texas Medical School at San Antonio, Acting Dean and Associate Dean for Academic Affairs at the University of California at San Diego School of Medicine; and Deputy Director of the National Institutes of Health Bureau of Health Manpower.

Dr. Dunn was intimately involved in the institution of poster sessions at the Annual Educational Conference from their inception, as both a judge and councilor. He took great delight in the innovative presentations that encompassed all areas of graduate medical education, and enthusiastically watched the development of best practices related to the Core Competencies and work hours requirements. The ACGME is honored to name this Poster Hall in his memory.

2023 ACGME Annual Educational Conference

Poster #1: Better Together Physician Coaching: A Scalable Online Group Coaching Program to Reduce Burnout in Trainees: A National Randomized Controlled Trial

Author(s): Tyra Fainstad, MD; Adrienne Mann, MD; Pari Shah, LCSW; Nathalie Dieujuste, BS; Adnan Syed, BS; Christine Jones, MD

Institution(s): University of Colorado School of Medicine; University of Denver

Abstract Type: Research-focused

Background
Physician burnout starts early in training, disproportionately impacts women and those URM, and is detrimental personally and professionally. Physicians and trainees have higher levels of resilience than other fields, yet more burnout and lower self-compassion. Of the described trainee wellness programs, few are more than marginally effective, sustainable, or scalable. One promising intervention is professional coaching ("coaching") though literature in trainees is limited in scope and duration. We piloted an online group coaching program: Better Together Physician Coaching in an RCT of 101 female residents at the University of Colorado and found it reduced emotional exhaustion by 3.26 points ($p=0.03$), reduced imposter syndrome ($p=0.002$) and increased self-compassion ($p<0.001$), with sustained effect at 12 months. These results were limited by the single-site nature and a relatively homogenous participant population. Here, we seek to test our programs generalizability and scalability.

Objectives
Our hypothesis is that the program will show similar results and be generalizable to GME programs nationwide. Our primary research question is: does Better Together reduce burnout as measured by the Maslach Burnout Index (MBI), and secondarily improve: self-compassion, imposter syndrome and moral injury. We also will measure engagement data with the website materials, coaching calls and written coaching to see if there is a "dose effect" with the program in terms of our outcomes.

Methods
This is a prospective, randomized controlled trial. Participants were recruited to voluntarily enroll by email from 29 participating GME sites. They all completed a presurvey measuring primary and secondary outcomes and then be randomized to an intervention group (coaching from September 1, 2022-December 31, 2022) or a control group (coaching from February 1, 2023-May 31, 2023). A post-survey mirroring the pre-survey will be distributed in January 2023, and statistical analysis will be performed on an intent-to-treat basis. Descriptive statistics and tests for differences will be computed for characteristics. The primary outcomes of MBI subscale scores will be analyzed with separate linear mixed models with fixed effects for time (pre/post), intervention (treatment/control), and an arm-by-time interaction. Similar regression analyses will be conducted for the secondary outcomes. Hypothesis tests will be two-sided with alpha=0.05 and p-values and confidence intervals will be reported.

Results/Outcomes/Improvements
We will have results by the time of this conference, and expect to include them in this poster or oral abstract.

To date, we have enrolled 1022 female trainees from 28 GME programs across the country. Five hundred six were randomized to the intervention arm and 516 were randomized to the control arm. We stratified by site and PGY level, accounting for the small difference in size between the two arms.

Our primary outcome is Burnout as defined by the Maslach Burnout Inventory (MBI), a 22-item measurement of worker burnout which assesses emotional exhaustion (EE), depersonalization (DP), and personal fulfillment (PF) domains.

Our secondary outcomes include: Self-Compassion as defined by Neff's Self Compassion Score Short Form (SCS-SF), Moral Injury as defined by the Moral Injury Symptom Scale for Health Professions (MISS-HP), Imposter Syndrome as defined by Young's Imposter Syndrome Symptoms Scale (YISS), and Flourishing as defined by the Secure Flourishing Index (SCI).

Significance/Implications/Relevance

Professional coaching may be an effective strategy to reduce emotional exhaustion and imposter phenomenon, while increasing self-compassion amongst female physician trainees. Institutional investment in professional life-coaching is a scalable way to support trainee wellbeing. Better Together coaching is a unique approach that also demonstrates the feasibility of leveraging certified physician coaches to deliver group-based coaching through asynchronous, multi-modal delivery for participants to engage in a self-directed way and allowing for a larger population to be served. This coaching model holds great promise to provide coaching at many points along the training and career trajectory for physicians to mitigate burnout, imposter syndrome, and foster self-compassion.

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Fainstad T, Mann A, Suresh K, et al. Effect of a Novel Online Group-Coaching Program to Reduce Burnout in Female Resident Physicians: A Randomized Clinical Trial. JAMA Netw Open. 2022;5(5):e2210752.

Poster #2: Better Together: A Novel Online Physician Group-Coaching Program to Reduce Burnout in Trainees: A Longitudinal Analysis

Author(s): Tyra Fainstad, MD; Adnan Syed, BS; Vall Vinaithirthan, BS; Pari Shah, LCSW; Christine Jones, MD; Adrienne Mann, MD

Institution(s): University of Colorado School of Medicine; University of Denver

Abstract Type: Research-focused

Background
Physician burnout begins in training and is linked to increased errors and patient mortality, physician depression, substance abuse, and job turnover. Physicians are shown to have high levels of grit, resilience, and other adaptive wellness qualities, but often lack self-compassion compared to other fields. Low self-compassion contributes to burnout and likely stems from perfectionism, strong negativity biases, and frequent comparison to peers. Many interventions have attempted to improve trainee burnout, but often have no effect, or, at best marginally improve short-term burnout. Little is known about their long-term impact.

Objectives
We piloted Better Together Physician Coaching (BT), a group coaching program with a focus on self-compassion for 101 female-identifying residents at the University of Colorado in a randomized controlled trial which reduced burnout and imposter syndrome and increased self-compassion. Using pre-post data from all participants who received BT over two cohorts, this study seeks to understand long-term effects on outcomes.

Methods
We performed a secondary analysis of survey data from the pilot implementation of BT collected between January 2021 and June 2022. Baseline, six, and 12 month surveys containing validated wellness tools were offered to all participants. We present data for participants who completed a baseline survey and were offered both six- and 12-month post-surveys. Fischer's exact test and Wilcoxon rank sum tests were used in descriptive analyses of categorical variables and continuous variables, correspondingly. Two-sample t-tests between baseline and post-six months and baseline and post-12-month results were completed for all outcome measures.

Results/Outcomes/Improvements
Of 101 participating trainees, 95 responded to a baseline survey (94%) immediately preceding their BT coaching initiation, 66 responded to a six-month survey (69%) and 36 responded to a 12-month survey (38%). The median age was 29.0 years, all were female-identifying, and most were heterosexual. For our primary outcome of burnout using the Maslach Burnout Inventory, no statistically significant differences were observed when comparing baseline to 6 months or baseline to 12-month scores. Compared to baseline self-compassion (SCS-SF) scores [mean = 33.2 (SD 6.74)], participant scores significantly improved after six months (mean = 38.2(SD 7.79), $p < .001$) which remained still significantly improved after 12 months (mean = 36.7(SD 7.59), $p = .020$). Impostor syndrome symptoms improved significantly from baseline to six months (mean = 5.41 (SD 2.07) versus mean = 4.38(SD 2.37) respectively, $p = .005$), which was not sustained after 12 months (mean = 4.66(SD 2.18), $p = .081$).

Significance/Implications/Relevance

This study assessed the longitudinal outcomes of BT coaching. Results from the pilot showed the program improved burnout in our intervention arm compared to control participants whose burnout worsened. Simply put, BT mitigated the otherwise worsening burnout in residents over time. This longitudinal study showed significant and sustained improvement in self-compassion and a trend towards sustained improvements in EE and impostor syndrome. These findings are consistent with prior studies showing a waning effect in some domains with sustained improvements in others. A core focus of BT was coaching towards self-compassion, perhaps contributing to sustainable improvements in this measure. Limitations include our single-site, homogenous sample. There was no control group for this longitudinal study since we offered coaching to our initial control group following the pilot and their longitudinal data are included here. BT may offer a sustainable way to improve self-compassion in trainees.

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Poster #3: The Association between Resident Milestone Ratings and Early Career Physician Professionalism

Author(s): Misop Han, MD, MS; Stanley Hamstra, PhD; Sean Hogan, PhD; Eric Holmboe, MD, MACP, MRCP; Kelly Harris, MD; Eric Wallen, MD; Gerald Hickson, MD; Kyla Terhune, MD; Bruce Trock, PhD; Kenji Yamazaki, PhD; Jessica Bienstock, MD; Henry Domenico, MS; William Cooper, MD, MPH

Institution(s): Johns Hopkins University; University of Toronto; ACGME; University of Colorado; University of North Carolina; Vanderbilt University

Abstract Type: Research-focused

Background
ACGME's Milestones ratings provide a framework across specialties by which residents and, eventually independent physicians, can be evaluated. The Patient Advocacy Reporting System ® (PARS), a reporting and intervention system based on unsolicited patient complaints was developed to alert physicians in independent practice to their risk of adverse patient outcomes and malpractice claims. It is unknown what modifiable factors prior to independent physician practice can predict which physicians will experience challenges in professionalism. We linked the ACGME's Milestone ratings in Professionalism and Interpersonal & Communication Skills (P/ICS) during the last year of GME and the unsolicited patient complaints as measured by the PARS program during the first year of independent physician practice.

Objectives
To investigate the association between resident evaluation measures and the future independent physician performance in professionalism.

Methods
We conducted a retrospective cohort study of residents and fellows in ACGME-accredited training programs who completed training between July 1, 2015 and June 30, 2019 and had at least one year of independent practice at a PARS site after completing training. The primary exposure of interest was the lowest P and ICS ratings at the last six months of residency training. The PARS score after one year of practice at a PARS site was used as an outcome. We calculated the lowest Milestone rating for two competencies: P and ICS. We compared the distribution of covariates across each of the primary exposure categories using Pearson's chi-squared test for categorical variable and a Mann-Whitney test for continuous variables. To test the effect of milestone categories on PARS score, we used a Cumulative Link Mixed Effects Model (ordinal regression model with mixed effects). To test the robustness of study assumptions, we performed several sensitivity analyses.

Results/Outcomes/Improvements
The final study cohort included 9,343 physicians who completed an ACGME training program and started independent practice at a PARS site. In unadjusted analyses, the proportion of physicians with PARS Year 1 scores in the highest risk group (>20) was significantly greater in the milestones rating groups corresponding to P and ICS milestone ratings of novice/beginner

(0-2.5) and competent (3-3.5), compared to those who received ratings of proficient (4) and expert (4.5-5) (chi-square test statistic=23.4, p<.001). In the primary multivariate ordinal regression model, physicians in the lowest milestone rating groups (beginner/novice [0-2.5] and competent [3-3.5]) were significantly more likely to have higher PARS Year 1 scores than the reference group of proficient (4) (p=.001). The group receiving milestones ratings as expert (4.5-5) in P/ICS did not differ in terms of the ordinal PARS Year 1 score category, compared to the proficient (4) group.

Significance/Implications/Relevance

Graduating residents who underperformed with lower ratings in the ACGME Milestones in P/ICS had significantly higher numbers of patient complaints in the first year of independent practice. Graduating residents who had proficient ratings had similar patient complaints as those who had expert ratings. These findings were robust to several sensitivity analyses designed to test key study assumptions. Milestones are effective at identifying those at risk who may need more support during GME or in the early part of their independent practice career, particularly those with very low Milestone ratings. The findings from this study may enhance the engagement of the GME community in resident evaluation and performance improvement effort in P/ICS which will eventually lead to a safer environment of care.

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Poster #4: Trends in Industry Payments to Physicians in the First Six Years after Graduate Medical Training

Author(s): Misop Han, MD, MS; Sean Hogan, PhD; Eric Holmboe, MD, MACP, MRCP; Yuezhou Jing, MS; Kenji Yamazaki, PhD; Bruce Trock, PhD

Institution(s): Johns Hopkins University; ACGME

Abstract Type: Research-focused

Background
Financial incentives and conflicts of interest can influence physician decision-making. It is important to understand financial interactions between industry and newly independent physicians using a national transparency program.

Objectives
To identify trends in industry payments to recent graduates of the Accreditation Council for Graduate Medical Education (ACGME)-accredited residency/fellowship programs in Orthopedic Surgery (OS), Neurosurgery (NS), and Internal Medicine (IM) as a comparison group.

Methods
This retrospective cohort study analyzed CMS's Open Payments (OP)'s reports of industry payments made between July 1, 2015 and June 20, 2021 to newly independent physicians who recently graduated from residency/fellowship programs in NS, OS, and IM between January 1, 2015 and December 31, 2019. The main outcomes were industry payments to newly independent physicians, including any general payments (non-investment or non-research) and at least $5,000 of general payments in aggregate value per year, which are considered significant financial conflicts of interest. The percentage of newly independent physicians accepting general payments during the first six years after graduation was analyzed by specialty and sex using cumulative incidence curves and hazards ratios (HRs) in univariable and multivariable analyses.

Results/Outcomes/Improvements
There were 45745 recent graduates (28137 men [62%]; median age at graduation, 33 [IQR, 31.0-35.0 years]) in neurosurgery (n=595), orthopedic surgery (n=3481), and internal medicine (n=41669). Overall, 77% (n=35320) accepted any general payments, while 9% (n=3998) accepted at least $5,000 of general payments per year. In the first two years of independent practice, 95% (n=3297), 92% (n=546), and 59% (n=24522) of newly independent physicians in OS, NS, and IM, respectively, accepted any general payments. A higher percentage of the newly independent physicians in OS and NS accepted any and at least $5,000 of general payments ($p<0.01$). A higher percentage of male physicians compared with female physicians accepted any and at least $5,000 of general payments ($p<0.01$). The overall general payments accepted between July 2015 and June 2021 by these newly independent physicians totaled more than $172 million.

Significance/Implications/Relevance
In this cohort study of newly independent physicians in OS, NS, and IM, the financial relationship with potential conflicts of interest between newly independent physicians and industry began to develop soon after training programs and continued to expand in the early years of newly independent physician practice. Newly independent physicians in surgical specialties and male physicians accepted significantly higher industry payments. Further studies

are needed to evaluate whether modifiable factors, such as the ACGME's Milestones in professionalism and systems-based practice, are associated with the future outcome of newly independent physicians accepting general payments.

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Poster #5: Is Height an Unconscious Bias during Orthopedic Residency Selection?

Author(s): Austin Smith, BA; James Layson, DO; Valerie Davidson, DO; Benjamin Best, DO; Ivan Bandovic, DO

Institution(s): Michigan State University College of Human Medicine; Ascension Macomb-Oakland Hospital; Ascension St. John Hospital

Abstract Type: Research-focused

Background
Unconscious biases are learned stereotypes that are automatic, unintentional, and deeply ingrained with the ability to influence behavior of healthcare professionals (1-3). Unconscious biases regarding physical attributes impact admissions in higher education due to possible influences on the perception of applicants' attributes (4). For the first time in history, orthopedic surgery residency interviews operated through a virtual platform due to the COVID-19 pandemic. Thus, admission committees were blinded to the height of an applicant during this application cycle. Height is related to interpersonal dominance, increased social status, and upward social mobility (5). Therefore, we hypothesized that, because of this removal of height determination and unconscious bias, there would be a statistically significant difference in the average height of the incoming PGY-1 resident class, who interviewed virtually, when compared to the PGY-1-5 residents who interviewed in-person.

Objectives
To investigate the impact of unconscious height bias on orthopedic surgery residency admission in light of the virtual interview format used during the COVID-19 pandemic.

Methods
A survey was sent to all ACGME-accredited orthopedic surgery residency program directors to be forwarded to their respective residents. The survey was sent a total of five times from June 2021 to December 2021 and was constructed to collect the following: year in medical training, interview format, height, age, and consent to participate in the survey. Participants were divided into groups according to postgraduate year (PGY) in training and interview format in order to compare PGY-1 residents who interviewed virtually to others. The groups included: PGY-1 Virtual, PGY-1 In-person, PGY-2-5 In-person and PGY-1-5 In-person. Height and age for each group were summarized with mean and standard deviation. ANCOVA was performed to assess for differences between groups after controlling for age as a covariate for all groups. Estimated marginal means with confidence intervals were calculated and compared between these same groups.

Results/Outcomes/Improvements
Our survey yielded a total of 195 respondents. This included four groups: PGY-1 Virtual (57), PGY-1 In-person (6), PGY-2-5 In-person (132) and PGY-1-5 In-person (138). The mean heights were 179.98 cm for PGY-1 Virtual, 183.9 cm for PGY-1 In-person, 179.25 cm for PGY-2-5 In-person and 179.33 cm for PGY-1-5 In-person. The estimated marginal mean heights for PGY-1 Virtual and PGY-1-5 In-person were 181.32 cm and 178.76 cm respectively, with a mean difference of their estimated marginal heights of 2.57 cm. There was no significant effect of interview format on height after controlling for age between PGY-1 residents who interviewed through a virtual format and PGY-1-5 residents who interviewed in-person (p=0.084).

Significance/Implications/Relevance

This study investigated unconscious height bias in the orthopedic surgery residency admissions process through analysis of survey results from ACGME-accredited orthopedic surgery residency programs. Our results demonstrate that unconscious height bias did not significantly impact admissions decisions, as evidenced by the lack of significant difference in mean height between residents who interviewed through a virtual format and those who interviewed in-person. However, we feel that continued vigilance surrounding unconscious bias should be the focus of future studies, as it is just one important way to continue to prevent bias from affecting the admissions process.

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Poster #6: Scholarship Initiative Program (SIP): Increasing Scholarly Activity in an Orthopedic Residency Over an Eight-Year Period

Author(s): Valerie Davidson, MS, DO; Ivan Bandovic, DO; Adrian Olson, DO; Jacob Waldron, DO; James Layson, DO; Richard Hayward, PhD; Alan Afsari, MD; Benjamin Best

Institution(s): Ascension-Macomb Oakland Hospital; Ascension St. John Hospital

Abstract Type: Innovation-focused

Background
The Accreditation Council for Graduate Medical Education (ACGME) promotes scholarly activity as select activities that include discovery, integration, application, and teaching. For many decades, a common ACGME citation for community-based orthopaedic residency programs has been a lack of scholarly activity. Many obstacles have been cited in the literature for a low output in scholarship, including lack of mentoring, financial support, time, infrastructure, formal research curricula, and perceived value of research.

Objectives
In this paper we sought to 1) illustrate interventions geared to increase scholarly activity in 2018 through the scholarship initiative program (SIP), and 2) provide an objective comparison of the scholarship activity items (SAI) between the pre- and post-intervention periods.

Methods
The study period from July 1, 2014 - June 20, 2022 was divided into two time periods: the pre-intervention (July 1, 2014 - June 30, 2018) and post-intervention (July 1, 2018 - June 30, 2022) periods, each spanning eight years. The intervention date was July 1, 2018, when a new program director was hired and implemented the scholarship initiative program (SIP). The SIP included interventions such as faculty recruitment, culture shift, mentorship, resource awareness and utilization, quarterly research meetings, research requirements, resident recruitment, financial incentives, and public recognition.

Results/Outcomes/Improvements
When comparing the pre- and post-intervention periods, there were significant increases in the following metrics: resident presentations (12 to 76, p-value .028), resident peer-reviewed publications (3 to 43, p-value .029), faculty presentations (4 to 84, p-value .028), and unique peer-reviewed publications (5 to 35, p-value .027). There was a trend towards statistical significance in faculty peer-reviewed publications (5 to 37, p-value .055). There was a trend towards higher Impact Factor of the journals of published manuscripts (1.3 to 1.8, p-value .999), although not statistically significant.

Significance/Implications/Relevance
The implementation of a SIP in 2018 created an opportunity to study scholarly output during a pre and post implementation period. We found that implementation of a SIP produced a statistically significant increase in the number of SAI in our orthopedic surgery program across multiple metrics. As we have transitioned to ACGME accreditation, we have found the SIP impactful both professionally and academically. It is the author’s opinion that any residency program could use a SIP, or a variation of our SIP, to help reach the scholarly activity goals of their program and of the ACGME.

Poster #7: An Analysis of Association between ACGME Accreditation and Patient Quality Outcomes in US Hospitals

Author(s): Vivian Stellakis, MA, C-TAGME; Peter Ludlow, MPhys, MEM, PMP; Lauren McGuire, MBA, C-TAGME; Deborah Considine, BA; Barry Rosenzweig, MD, FACC; Michael Ambrosino, MD, FACR; Maxine Simon, MS, FACHE

Institution(s): NYU Grossman School of Medicine

Abstract Type: Research-focused

Background
Graduate medical education (GME) training is a requirement for all physicians in the United States in order to be eligible for board certification and independent practice. The Accreditation Council for Graduate Medical Education (ACGME) is the national accrediting body for all specialty training programs and the institutions or hospitals that sponsor them. The ACGME sets requirements for quality and safety activities that must be conducted by GME programs and sponsoring institutions and performs inspections to ensure that these requirements are met. The US federal government's Centers for Medicare and Medicaid Services (CMS) pays ACGME-accredited institutions a total of $15 billion annually to reimburse them for costs associated with trainees in accredited training programs.

Objectives
Given the important connection between ACGME accreditation and CMS funding of physician training, a study was conducted to understand if hospitals that sponsor ACGME-accredited GME programs are associated with better patient outcomes than those hospitals that do not.

Methods
An observational cross-sectional study was conducted via secondary quantitative analysis utilizing existing data sets that are routinely collected and publicly reported by CMS and the ACGME. Hospitals (CMS n=4700, ACGME n=744) from the two data sets were mapped using a combination of string matching, ZIP code, and manual inspection. The following quality measures were evaluated: mortality rates from heart failure (HF), pneumonia, and chronic obstructive pulmonary disease (COPD); complication rates due to pressure ulcers, post-operative sepsis, or pulmonary embolism and deep vein thrombosis (PE/DVT); hospital acquired condition (HAC) rates such as central line bloodstream infections (CLABSI), catheter-associated urinary tract infections (CAUTI), and Clostridioides difficile (C. diff) infections; and Star Ratings from CMS. The significance of the difference in outcomes was tested using the Mann-Whitney U Test for each quality metric.

Results/Outcomes/Improvements
The Mann-Whitney U Test showed that the differences in the outcomes between the ACGME-accredited and non-accredited hospitals were statistically significant for eight of out the 10 quality metrics. Specifically, ACGME-accredited hospitals perform significantly better ($p<.05$) in heart failure mortality rates, C. diff infection rates, CAUTI rates, and CLABSI rates. Accredited hospitals perform significantly worse ($p<.05$) in COPD mortality rates, PE/DVT complication rates, pressure ulcer rates, and star ratings. Pneumonia death rates and sepsis rates were not statistically significantly different ($p>.05$).

Significance/Implications/Relevance

The findings from this research do not rule out the potential benefits of ACGME accreditation when it comes to patient quality outcomes. This research, which the authors believe is the first to cohort hospitals by ACGME accreditation status, provides a roadmap for multiple further avenues of investigation. It can also be a contribution to policy discussions related to funding of ACGME-accredited training, specifically as the government will need to address the impending physician shortage in the US Policy makers may determine that funding for additional research is appropriate based on the findings of this current research. Patient quality outcome metrics will continue to be one of the most prominent factors in assessing patient care, and while the federal government spends tens of billions of dollars annually supporting physician training in ACGME-accredited programs, there is a clear public interest in understanding the relationship between these two major areas.

Poster #8: Looking Beyond the Numbers: A Comparison of Operative Self-Efficacy, Supervision, and Case Volume

Author(s): Rachel Jensen, MD; Ananya Anand, MD; LaDonna Kearse, MD; James Korndorffer Jr., MD MHPE

Institution(s): Stanford University; Howard University

Abstract Type: Research-focused

Background
A 2020 survey of graduating PGY-5 general surgery residents linked to the 2020 American Board of Surgery In-Training Examination (ABSITE) revealed significant deficits in preparation for independent practice with only 7.7% of graduating residents reporting self-efficacy (SE) for all 10 commonly performed operations surveyed. These findings have not yet been compared to individual case-specific data.

Objectives
We sought to evaluate if a similar deficit was observed through an operative assessment tool, (SIMPL OR), which collects individual case data for level of operative supervision using the Zwisch scale, and through ACGME Case Logs.

Methods
Case information for the same 10 previously surveyed operations was analyzed for residents completing their final year of training in the 2019-2020 academic year, representing the same cohort that completed the 2020 post-ABSITE survey. Cases were categorized based on the SE survey findings into high, middle (mid), and low SE tiers. High SE tier cases included laparoscopic (lap) cholecystectomy, lap appendectomy, diagnostic laparoscopy, wide local excision; mid SE tier cases included breast biopsy, inguinal hernia, trauma exploratory laparotomy; and low SE tier cases included thyroidectomy, lap right hemicolectomy, trauma thoracotomy. Trainee-reporting of “supervision only” for the level of case supervision was used as a surrogate for SE. Case volume information was obtained through the ACGME National Data Report. Data analysis was conducted using ANOVA and chi-squared tests.

Results/Outcomes/Improvements
Reported case SE and “supervision only” ratings were strongly correlated (r=.846, p=.002), while SE and case volume showed a moderate, non-significant correlation (r=.614, p=.143). There were significant differences in SE between high v mid v low tiers (87.7% v 68.2% v 25.4%, p=0.008 for high-mid, p<0.001 for high-low and mid-low). The percentage of cases completed with “supervision only” followed similar trends (32.6% v 13.8% v 4.9%, p=0.006 for high-mid, p<0.001 for high-low, p=0.227 for mid-low). While the total volume of cases decreased from high to mid to low SE tiers (average 91.8 v 20.8 v 11.1), this did not reach statistical significance on post-hoc analysis.

Significance/Implications/Relevance
Supervision data collected through the SIMPL platform and case volumes obtained through review of ACGME Case Logs show similar trends compared to resident-reported SE data. However, there are notable differences in percentages between reported SE and the

“supervision only” level of supervision. This poses the questions: 1) how are residents becoming self-efficacious without “supervision only” experiences; and 2) why are self-efficacious residents not being given opportunities to do cases with “supervision only”? Additionally, while review of ACGME Case Logs suggests a trend between increasing case numbers and increasing tiers of SE, this was not statistically significant. Therefore, it is essential to look beyond case numbers to train self-efficacious graduates.

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Poster #9: Implementing Observed Structural Teaching Experiences (OSTEs) as a Faculty Development Motivator

Author(s): Samuel Sandowski, MD; Paul Moglia, PhD

Institution(s): ISMMS/Mount Sinai South Nassau **Abstract**

Type: Innovation-focused

Background
The ACGME requires all faculty to participate in faculty development (1). The use of standardized patients and OSCEs are common in medical education (2). However, the use of OSTEs, (observed teaching experiences) though documented more than 25 years ago, is still not a commonly used teaching tool (3). Faculty are reluctant to being observed or recorded during patient encounters for a myriad of reasons, including being “graded,” insufficient time during clinic sessions, obtaining consent from patients, and legal considerations as to discoverability of the encounter. Creating an OSTE overcomes these barriers and allows for precepting challenges to be encountered by all faculty. One-on-one feedback from the faculty development experts allows formative feedback without being graded. Debriefing and reviews of checklists for OSTEs provides an opportunity to learn about the teaching skills and the learning environment, and this alone may provide an opportunity for faculty development.

Objectives
The goal was to create and implement OSTEs, assess its effectiveness, and have faculty self-identify and implement areas for self-improvement. These OSTEs were to be used as a springboard for faculty development activities. After debriefing the OSTE, faculty completed a questionnaire about their experience. They then picked one area they wished to improve over the next three months, and they incorporated a change to promote this improvement. After three months they presented this change to the other faculty at a faculty meeting. As noted, OSTEs are not widely used, and there is no literature showing that faculty have taken the step to implement what they have learned.

Methods
Three OSTEs were created for family medicine faculty: (a) the resident unable to present in a concise yet comprehensive way; (b) the resident more interested in finishing the patient encounter than caring for the patient; (c) the comprehensive resident with time management challenges. Residents were taught to play the role of the standardized resident. The OSTE checklist included assessments of the preceptor’s management of eight aspects of the learning environment. Faculty also completed a self-evaluation after each encounter. After each encounter the faculty had individualized debriefs with the faculty development expert, and based on the debrief and the checklist, the faculty identified and area they sought self-improvement.

At a faculty meeting three months later, each faculty member described the change they made and what they learned over the past three months.

Results/Outcomes/Improvements
The OSTE project resulted in the following:
1. Creation of three standardized resident OSTE cases
2. Implementation of the OSTEs

3. Self-assessments of faculty revealing that they tended to score themselves lower on the check list items than the resident, with the exception of listening skills and providing feedback.
4. Using a Likert scale of 1-5, immediate post-OSTE feedback found:
    a. the OSTEs useful (4.7/5)
    b. the cases realistic (4.9/5)
    c. the items on the check list appropriate (4.7/5)
    d. the debriefing session was helpful (4.7/5)
5. All seven faculty identified one area for intervention and implemented a change for three months, and presented this change and lessons learned at a faculty meeting
6. All seven faculty provided at least one article, (total of 10 articles) for further reading associated with their area for change.
7. A two-year post follow up survey revealed all participants continued to find the OSTE experience valuable (4.9/5).

Significance/Implications/Relevance

OSTEs are significant tool for teaching faculty though underutilized. This small sample that included participation from all core faculty from one department resulted in significant satisfaction with OSTEs. This is particularly significant in that the faculty was very hesitant about being videotaped during actual patient encounters and had provided pushback in years past. They found the utility of the OSTE valuable in real time, three months after when performing their presentation, and at a two-year follow up. The cost of the OSTE was essentially $0. The use of our own faculty development experts, our own residents, and laptops and smart phones in the Family Medicine Center defrayed all costs. There greatest cost is the time commitment to devote to the OSTEs. We conclude that standardized residents and OSTEs for faculty are noted to be successful faculty development and driving change, and OSTEs can be used in all fields of residency training, in almost all institutions.

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Poster #10: Resident-Directed Post-Discharge Phone Calls Provides Enhanced Education Via a Feedback Loop

Author(s): Samuel Iee, DO; Micah Sy, MD; Farnaz Khalighinejad, MD; Jordana Sandy, DO; Christine Arthur, DO; Paul Wright, MD

Institution(s): Nuvance Health

Abstract Type: Innovation-focused

Background
Quality patient care has been described as “care that is safe, effective, timely, efficient, equitable and patient-centered.” To provide quality patient-centered care, there has been a movement from a quality improvement perspective to become “responsive to a patient’s needs, and values.” Healthcare organizations that focus on and emphasize the engagement of patients thrive in the practice of patient-centered care. Patients are provided opportunities to express their opinions in order to increase involvement in their own care.

Objectives
Our objective is to improve a resident’s education in patient-centered care through follow-up phone calls to discharged patients.

Methods
Patients were contacted via telephone call by the neurology residents within a 48–72-hour time frame after their discharge. The follow up phone call included three questions (i) How are your symptoms that initially brought you to the hospital since you have been discharged? (ii) Do you have any questions about your medications or discharge instructions that you would like to discuss? (iii) Have you made your follow up visit? Data analysis will be retrospectively performed of the categories listed above on patient’s satisfaction of their health care experience before discharge follow up phone calls and will be compared to prospective data after discharge follow up phone calls.

Results/Outcomes/Improvements
Prospective data of after discharge follow up phone calls are still pending. Residents furthered their patient care experience with follow up telephone calls.

Significance/Implications/Relevance
Resident-led discharge follow ups have yielded measures for improvement in patient care along with furthering residents’ education through feedback loops on discharge planning. The post discharge phone calls allowed residents to revisit the care delivered. Positive feedback from the surveys strengthened their care delivery. Challenging situations and areas of opportunity were discussed to improve patient care. Improvement strategies then discussed amongst other neurology attendings and residents during daily conferences. Educational sessions were implemented in order to avoid negative patient experience and ultimately enhance the resident’s education and skill set. Follow up phone calls allowed residents to expand their scope of practice beyond the walls of the hospital by emphasizing that their education continues when a patient is discharged.

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Poster #11: A Review of Annual Program Evaluation and Improvement (APEI) Exercise in SingHealth Residency, Singapore

Author(s): Yin Ru Tan, MBBS; Sharon Hing, BA; Jia Qing Tan, Beng; Ching Ming Wan, BSc; Hak Koon Tan, MBBS

Institution(s): SingHealth Residency; Singapore Health Services Pte Ltd

Abstract Type: Research-focused

Background
The Accreditation Council for Graduate Medical Education (ACGME) requires programs to engage in Annual Program Evaluation and Improvement (APEI) by monitoring and tracking resident performance, program quality, faculty development and graduate performance. SingHealth is the largest Sponsoring Institution in Singapore. It provides residency training in 35 programs to 950 residents. SingHealth Residency started the APEI exercise since 2016.

Objectives
The APEI exercise is a comprehensive review of the SingHealth Residency program, and includes a qualitative evaluation of each of the 35 different residency programs. The APEI exercise allows programs to self-reflect by identifying strengths, weaknesses, opportunities, and threats. It also allows programs to identify Areas for Improvement (AFI) so as to identify possible remedial actions. The Graduate Medical Education Committee (GMEC) oversees the APEI exercise.

Methods
All 35 SingHealth residency programs were tasked to perform the APEI exercise annually using institutional templates. Results were submitted to the GMEC in June each year for consolidation, evaluation, and review. Results from the APEI exercises from 2016 to 2020 were analyzed.

Results/Outcomes/Improvements
SingHealth Residency consistently achieved a 100% response rate from the different residency programs since 2016. SWOT analyses were consolidated across programs. There was an increase in the number of AFIs identified in year 2020. Throughout the review period of five years, majority (an average of 72%) of the AFIs were consistently related to program quality. Over the last two years, there were improvements in areas related to faculty development and resident performance. However, issues related to resident well-being increased over the last two years. In addition, the top five common themes from analyses of AFIs were issues related to educational environment, clinical experience, learning and working environment, faculty development and evaluations. Most of the unresolved AFIs were related to program quality, which included issues such as shortage of manpower and decrease in clinical experience, possibly related to the COVID-19 pandemic.

Significance/Implications/Relevance
SingHealth Residency's APEI exercise allows the holistic assessment of our programs and is essential for the continued improvement of our programs. This helps to ensure continued success and accreditation of our programs for the benefit of our residents.

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Poster #12: The Mediating Role of Residents' Well-Being between Program Leadership and Quality of Care: A Cross-Sectional Study

Author(s): Fatima Msheik El Khoury, PhD; Diana Naser, PhD; Zin Htway, PhD; Salah Zein El Dine*, MD

Institution(s): Walden University; American University of Beirut

Abstract Type: Research-focused

Background
Research has shown that organizational leadership and support affect organizational outcomes in several sectors, including health care. However, less is known about how organizational leadership might influence the well-being of clinical trainees as well as the quality of their patient care practices.

Objectives
This study examined the mediating effects of burnout and engagement between program director-resident relationship quality and residents' reported quality of care, and the moderating effect of perceived departmental support.

Methods
The authors conducted a cross-sectional study in September 2020, using a 41-item questionnaire, among 20 residency programs in an academic medical center in Lebanon. Measures included program director-resident relationship quality, perceived departmental support, burnout subcomponents, engagement, and self-reported quality of care. Ordinary least squares regression was used to conduct parallel mediation and moderated mediation analyses using SPSS macro-PROCESS, to assess the strength and direction of each of the proposed associations.

Results/Outcomes/Improvements
A total of 95/332 (28.6%) residents responded. Results revealed that program director-resident relationship quality had a significant indirect effect on residents' suboptimal patient care practices and attitudes towards patients, through at least one of the well-being dimensions ($p < .05$). Perceived departmental support did not play a dominant role over program director-resident relationship quality, and thus did not influence any of the mediated relationships.

Significance/Implications/Relevance
Our study adds a new dimension to the body of literature suggesting that program director-resident relationship quality plays an important role in promoting residents' well-being and achieving important clinical health outcomes. Such findings imply that the quality of program director-resident relationship could be an important component of residents' wellbeing and patient safety. If further research confirms these associations, it will become imperative to determine what interventions might improve the quality of relationships between program directors and residents.

Poster #13: Junior Doctors Running Outpatient Clinics After a 24-Hour Shift: Effects on Patient Satisfaction and Prescription Errors

Author(s): Chee Yang Chin, MBChB, MSc; Swee Leng Kui, MBChB

Institution(s): National Heart Centre Singapore

Abstract Type: Research-focused

Background
Cognitive performance after 24 hours' wakefulness is comparable to alcohol intoxication, sleep apneoa, and narcolepsy.

Intuitively, sleep deprivation impacts junior doctors' performance and thus patient care. However, the literature is conflicting, with insufficient focus on patient outcomes. We studied if patient outcomes in outpatient clinics were adversely affected when patients consulted a post-call registrar versus a non-post-call registrar.

Objectives
We sought to determine if patient outcomes in outpatient clinics are adversely affected when patients consult a post-call registrar vs a non-post-call registrar.

In this study, "registrar" refers to a junior doctor in the final stages of training prior to specialist accreditation. "Post-call" refers to the last six hours of a continuous 30-hour working shift. "Prescribing error" was defined as any erroneous medication prescription, including the specification of the wrong medicine, dose/frequency, or the inadvertent omission of a necessary drug.

Methods
This prospective, quantitative study was set in a high volume, specialist outpatient Cardiology clinic in a large teaching hospital in Singapore.

Between November 2019 and February 2020, patients from all clinics run by a post-call registrar were recruited to the study group. Patients from non-post-call clinics run by the same registrars on a different day were recruited as controls.

Outcome measures included patient satisfaction and prescription errors.

Patient satisfaction was measured using a validated five-item four-point Likert scale questionnaire. Prescribing error rate was defined as the number of errors over the number of prescription orders.

Statistical analyses were performed using the Chi-Square test.

Results/Outcomes/Improvements
One hundred three of 106 (97%) patients in nine post-call clinics and 93 of 105 (90%) patients in nine non-post-call clinics consented.

The questionnaire completion rate was 99% in both groups. Five hundred thirty-six prescriptions were ordered in the study group, and 526 in controls.

In terms of patient satisfaction, the percentage of top-box responses (which indicates greatest satisfaction) was higher in the study group versus controls (79.3% vs 62.4%, p<0.001). The percentage of top-box responses for each questionnaire item was higher in the study group.

In terms of prescription errors, there was no significant difference in prescribing error rates between groups (1.31% vs 2.28%, p=0.23).

Significance/Implications/Relevance
Although unexpected, our findings importantly provided objective evidence that patients may safely consult a post-call registrar in clinic.

Both patient outcomes were congruent and provided a means of triangulation of results. Thus, no recommendations were made to change this decades-old practice.

Any impairment from physical or mental fatigue may possibly be mitigated by adaptive conscious efforts to be more conscientious when tired, or increased motivation from “post-call euphoria.”

The high patient response rate added validity to our findings. Larger, longer term, multicentre studies would inform of generalisability to other healthcare settings. Qualitative studies of junior doctors’ feelings when fatigued may shed light on the complex interaction of emotional factors that may compensate for tiredness.

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Poster #14: SingHealth Residency Clinical Learning Environment Review (CLER)

Author(s): Sharon Hing, Diploma; Jia Qing Tan, BEng; Jillian Ang Andrada, MD; Sahana Tamil Mannan, BSc; Ching Ming Wan, BSc; Hak Koon Tan, MBBS

Institution(s): SingHealth Residency; Singapore Health Services Pte Ltd; Singapore General Hospital

Abstract Type: Innovation-focused

Background
In July 2017, the accreditation system in Singapore moved to the Next Accreditation System International (NAS-I) for which ACGME-I mentioned that they will be conducting Annual Data Review and Self Study Visit. There will however not be CLER visits conducted in Singapore given the different healthcare landscape. SingHealth Graduate Medical Education Committee (GMEC) saw the value of adopting the concept of CLER, which builds on the model of continuous improvement. As such, since 2017, SingHealth Residency begin the development of the SingHealth-CLER framework, contextualizing the ACGME CLER pathways and expectations to the local context.

Objectives
The SingHealth-CLER aims to provide a conducive clinical learning environment for learners and at the same time ensure patient safety by ensuring that our residents are consistently engaged and trained with the correct processes in providing patient safety and healthcare quality. It is intended to define and review expectations in the six focus areas of clinical learning environment: patient safety; health care quality; care transition; supervision; resident wellness; and professionalism. It is not intended to duplicate but instead should complement the initiatives or processes from the respective Academic Clinical Programmes (ACPs) and support the core functions of SingHealth Duke-NUS Institute for Patient Safety and Quality (IPSQ) in the six focus areas.

Methods
Three Focus Area Subcommittees (FAS) were formed and tasked to conceptualize the expectations in the clinical learning environment for residency training based on the six focus areas. These expectations were used to develop the checklist for the CLER visit and survey questionnaire. To minimize overlaps in reviews, we integrated CLER into the Internal Review (IR) framework.

Results from the CLER survey, CLER visits, document checks and programme self-study were compiled for the IR committee. During the IR day itself, the committee would verify the CLER findings through interviews with the Residents, Faculty, PDs, and ACP leadership. Thereafter, each ACP will receive a detailed report on the IR findings. ACPs will present their action plans to the FAS, which in turn, will consolidate key findings and present recommendations and issues that need to be raised to institutional leadership through to GMEC.

Results/Outcomes/Improvements
Between October 2019 to September 2022, we have conducted 14 integrated IRs amidst the COVID-19 disruption. A total of 638 (83.5%) of our residents participated in the CLER survey. Based on the aggregated survey results, the residents viewed that there are processes for transition of care and the clinical learning environments have a supportive culture of safety, with

professionalism reinforced. Health care quality was rated lower, which could be due to the residents being in their junior years of training at the time of the survey. Arising from the CLER visits, the SI also noted the need to create further awareness on the presence of the Resident Procedural Competency and also will reinforce the responsibility of the residents to ensure they are certified competent to perform assigned procedures. Resident Wellness continues to be an important aspect of the clinical learning environment and will be supported through various wellbeing initiatives at the institutions.

Significance/Implications/Relevance

The internal reviews, with CLER visits incorporated, were conducted by ACPs at SingHealth Residency to promote conversations and encourage ACPs to build upon their strengths and address opportunities for improvement in the clinical learning environment for residency programmes under its ambit. The findings will be also consolidated at the Sponsoring Institutional level and shared with the institutional leadership to allow pooling of resources to address common issues across the ACPs and institutions under the SingHealth cluster. With the CLER visits incorporated in the internal review process, there would be an integration of findings on the resident clinical learning environment into how our programmes can improve their curriculum while maintaining compliance. With a better clinical learning environment, our residents would be able to provide better patient care to the population in Singapore.

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Poster #15: Designing Effective Annual Institutional Review – Indicators and Measures

Author(s): Selvia Kosim, BA; Selvia Kosim; Faith Chia Li-Ann, MBBS; Ang Wei Wei, BS; Serene Goh Kar Keow, BA

Institution(s): National Healthcare Group Pte Ltd

Abstract Type: Innovation-focused

Background
The ACGME Institutional Requirements stated that the GMEC must demonstrate effective oversight of the Sponsoring Institution (SI)'s accreditation through an Annual Institutional Review (AIR) process. The requirement stated that the AIR must include the most recent institutional Letter of Notification, ACGME-I survey of residents and core faculty members, and all programs' accreditation information.

The SIs must identify other institutional performance indicators and submit a written executive summary of AIR, including action plans and performance monitoring procedures resulting from the AIR. As multiple data points reside in various platforms, it became increasingly challenging for the SI to review the performance indicators efficiently.

Objectives
We aimed to design an effective AIR process and develop key performance indicators to allow the GMEC to review the performance and accreditation of residency programs. The key performance indicators set should enable the GMEC to identify deficiencies and areas for improvement effectively.

Methods
The AIR committee was formed, comprising the GMEC Executive Committee, additional key faculty members and resident representatives. The committee reviewed the list of indicators typically discussed and submitted at different settings, namely PEC meetings, internal reviews, annual updates, as well as performance indicators set by the Ministry of Health. As this was the first AIR for our institution, we curated a more comprehensive range of performance indicators to have a better overview of all the residency programs and their performance. We also developed a dashboard with dynamic colour coding for data visualisation.

Results/Outcomes/Improvements
The AIR committee developed five domains of performance indicators for the institution, namely (i) Programme quality and accreditation, (ii) Residents, (iii) Faculty, (iv) Resident and Faculty Surveys, and (v) Process. The dashboard allows the AIR committee to efficiently review the key performance indicators across all residency programs. The AIR committee was able to identify main areas for improvement and developed action plans which will be carried out over the course of the following academic year.

Significance/Implications/Relevance
Ensuring effective oversight of the institution's accreditation is an elaborate process and should comprise a review of various data at different points. The dashboard is a powerful tool for the AIR committee and GMEC to review the residency programmes effectively and efficiently.

Poster #16: Physician Comfort on Evaluating Patients with Disabilities in a Hospital in the Southern Region of Puerto Rico: A Quality Improvement Project

Author(s): Jose Colon, MD; Orlando Torres, MD; Maria Gratacos, Medical Student; Ariel Collazo-Lamb, MD; Alejandra Baez, Medical Student; Gabriel Chardón, Undergraduate Student

Institution(s): Ponce Health Sciences University; Centro Medico Episcopal San Lucas; Universidad Central del Caribe; Pontifical Catholic University Puerto Rico

Abstract Type: Innovation-focused

Background
Disabilities are physical or mental impairments that limit one or more life activities. There are several limitations to the quality of care that health workers provide to patients with disabilities. People with disabilities face unique healthcare barriers compared to those without disabilities, and these health disparities can be partially attributed to physicians' limited knowledge about caring for disabled patients (Santoro, 2018).

Objectives
Identify physicians' comfort level in evaluating and treating patients with disabilities. Describe physicians' awareness of medical institution resources allocated for patients with disabilities. Determine what training they have received, and the difficulties encountered to provide recommendations for future improvements regarding disability patients' access and quality of care at the institution.

Methods
An online survey of 23 questions based on prior studies (Santoro, 2018) regarding the education and comfort of resident physicians and medical faculty of Centro Médico Episcopal San Lucas at Ponce in treating patients with disabilities. The information recovered was anonymous and confidential.

Results/Outcomes/Improvements
We obtained 101 completed surveys out of 171 handed out, for a response rate of 59.02%. The data recollected reported that 87.1% (n=88) agreed that lack of knowledge is a barrier. Less than 20% (n=19) feel comfortable managing patients with disabilities. Eighty-one-point-two percent (n=82) are interested in caring for patients with disabilities, and 75.2% are not confident in their preparedness level.

Significance/Implications/Relevance
Many physicians rarely received training on how to treat disabled patients or did not feel comfortable dealing with them. Most physicians (80%) did not feel very comfortable treating patients with disabilities. Eighty-four percent of physicians believe that patients with disabilities have a medical disadvantage compared to people without disabilities. Sixty-nine-point-three percent of physicians have never or rarely received training to treat patients with disabilities. About 60% of physicians do not know if their institution has available resources. The data generated by this study provided short- and long-term recommendations for the institution to improve physician training and accessibility to resources available regarding patients with disabilities.

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Poster #17: Implementation and Evaluation of a One-Day Focused Trainees-as-Teachers Course for Residents and Fellows in Qatar

Author(s): Brijen Shah, MD; Margaret Allen, MD, PhD; Adeel Hassan Gaffar, MD; Abdullatif Al-Khal, MD; Kristen Al-Aamri, EdD, MBA; Carma Bylund, PhD

Institution(s): Icahn School of Medicine at Mount Sinai; Hamad Medical Corporation; University of Florida School of Medicine

Abstract Type: Innovation-focused

Background
Hamad Medical Corporation (HMC) is an ACGME-I-accredited institution and is Qatar's major undergraduate and post-graduate medical training site; trainees from two medical schools, 21 residency programs, and over 60 fellowship programs are under instruction within its institutions. HMC's Department of Medical Education has overarching responsibility for delivery of this training and champions the view that 'every doctor is a teacher.' Teaching responsibilities start early in a trainee's career pathway, with senior residents and fellows serving as the main teachers of our medical students and junior trainees. Organizations such as the Liaison Graduate Medical Education (LCME) and ACGME-I call for trainees who supervise, teach, and evaluate others to be adequately prepared for such roles. To that end, HMC's introduced in 2018 a 'Trainees as Teachers' workshop to enable those in training posts to improve all aspects of instruction they provide to other learners.

Objectives
To implement and evaluate a focused, skill based cross-program course on teaching, for residents and fellows. The course objectives were to describe adult learning principles; describe a model for feedback; and enumerate approaches for a diverse set of teaching settings and tasks. We share program evaluation data and a thematic analysis of action items learners shared.

Methods
We conducted a one-day workshop at HMC, led by the first three and the last authors, as medical education experts from the USA and UK, with considerable experience of teaching and training practice within Qatar. Content areas included fundamentals of adult education, principles of good feedback, teaching large and small groups, 'on the job' teaching microskills, teaching medical students, and teaching practical skills. The workshops combined lecture, role play, large and small group discussion, with microskills and feedback practice. Participants were divided into group of six-10 for these mini-rotations. The workshop was conducted 4 times between October 2018 and October 2021. The number of participants in each workshop ranged from 13 to 38. Immediately following the course, participants completed a post-workshop course evaluation survey in Qualtrics, with 14 items on a five-point Likert scale and five (5) open-ended items as asking for what they will change in their practice.

Results/Outcomes/Improvements
One hundred fourteen learners participated in the workshop, and 91.2% completed the post-course evaluation survey. Ninety-three-point-two percent reported Strongly/Somewhat Agree that their skills improved as a result of this course the workshop. Ninety-six-point-two percent of participants reported Strongly/Somewhat Agree that they could recognize medical students' needs and perceived themselves to be an effective teacher of medical students. Participants were asked what they would do differently in their teaching practice. Themes emerged include

the importance of student-centered learning, communication skills, facilitating interaction, learner engagement, and planning for teaching. For bedside teaching, themes include using microskills, RIME, and intentional role modeling. For large group teaching, themes focused on presentation skills such as brevity, using attention grabbers, and less reliance on slides, using questioning techniques and tips that were taught in the session. For procedural teaching, the theme of learner safety was emphasized.

Significance/Implications/Relevance
This course demonstrates how to create an implement a day long teaching skills course for an interdisciplinary group of residents and fellows. Most “resident as teacher” programs are based in a specialty and are a longitudinal track. This intuitionally sponsored program demonstrates the importance of the teaching role for residents and provides a centralized resource for programs to avail themselves of for their residents. Learners showed commitment to using new teaching and communication models. They demonstrated awareness of behaviors which can positively impact the learning environment across a variety of teaching scenarios. Our program is a scalable and reproducible approach to a “trainee as teacher” program.

Poster #18: Blueprint for Early Medical Student Exposure to Research, Trauma, and Radiology: Trauma Registry Gunshot Wound Projects

Author(s): Henderson Jones, MD, JD; Nicholas Kemper, BS; Rebecca Guan, BS; Tatiana Mamaliga, MD; Jonathan Joshi, MD

Institution(s): University of Louisville School of Medicine; University of Louisville Hospital

Abstract Type: Innovation-focused

Background
The literature describes the challenge of medical schools to give students exposure to different clinical disciplines to help clarify their career path in medicine. Also described in the literature are medical schools' challenges in creating student research experiences and giving students exposure to different research methodologies. Recent changes in medical student residency application objective metrics should lead to increased emphasis on research experience in residency applications.

Of particular interest to these authors is that dedicated clinical rotations in radiology are uncommon in US medical school core clinical rotations. And, therefore, there is an obvious need for medical students to be exposed to the field of radiology.

Objectives
The primary objective of this project was to give enrolled and visiting medical students at the University of Louisville School of Medicine exposure to the field of radiology and research experience within radiology. Secondary objectives were as follows: 1) choose a project topic and area of research that addressed a widely known public health issue in the Louisville community. 2) Utilize a readily available and well-developed dataset to allow students to quickly and efficiently identify specific categories of injuries to study. 3) Give students a clear starting point for research by introducing them to the widely utilized standards for analyzing injuries seen on radiographic imaging. 4) Give students opportunities to collaborate and lead each other in group research projects.

Methods
The University of Louisville (U of L) Institutional Review Board (IRB) approved this retrospective chart review to be conducted by the Department of Radiology on patients admitted to the U of L Hospital with a gunshot wound (GSW) from 2012-2022. One radiology attending and one radiology resident served as Primary Investigator and Sub-Investigator, respectively. The primary dataset utilized for the project was the Trauma Registry maintained by the Department of Surgery. Students were instructed to review the Injury Scoring Scales published by the American Association for the Surgery of Trauma (AAST). Students were encouraged to submit abstracts for poster presentation at the U of L local research conference, Research!Louisville. IRB allowed medical students who completed the Collaborative Institutional Training Initiative program to be added as Sub-Investigators of the project, and those medical students were surveyed for qualitative outcomes after their experience with this project.

Results/Outcomes/Improvements
This project included 17 students from two medical schools with distribution as follows: first year: one; second year: four; third year: eight; and fourth year: four (two visiting students). This was the first research experience for seven students and the first experience in radiology for 14 students.

A total of 13 posters produced from this project were presented at Research!Louisville conference. There were four project participants who collaborated on this project but presented unrelated posters at the conference. GSW project posters covered 13 categories of injury according to AAST injury scoring scales with characterizations of demographics and injuries, including radiologic and clinical findings.

All students indicated that this project clarified their career path, increased their ability to analyze spreadsheets and information in the EMR, and increased their readiness for more demanding research. Sixteen students indicated that the project gave them a greater understanding of radiology.

Significance/Implications/Relevance

This radiology-sponsored project had diverse appeal among medical students, with seven planning to apply for residency in radiology, five are undecided, and five are interested in anesthesia, emergency medicine, internal medicine, pediatrics, or family medicine. This project gave students opportunities to demonstrate leadership, and two fourth-year students applying for radiology were identified in the survey as having led and coordinated other students' participation in the project.

We aim to make this an annual project utilizing different datasets within the Trauma Registry (e.g., motor vehicle collision) for new inquiries to be undertaken by medical students wanting research experiences. We plan to invite all medical students to participate, particularly students interested in radiology, surgery, emergency medicine, and anesthesia.

This project presents a blueprint for residency programs to create research experiences for medical students and expose them to their specific fields.

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Poster #19: Effects of Physician Education on the Identification of Moderate and Severe Malnutrition at a Single Center Suburban Community Hospital

Author(s): Thomas Tritt, MD; Antonio Picon, MD; Lie Handali, RD

Institution(s): Stamford Health

Abstract Type: Research-focused

Background
Malnutrition is a major contributor to increased morbidity and mortality, decreased function and quality of life, increased frequency and length of hospital stay. Patients with malnutrition are 12% more likely to be admitted to the Emergency Department, two-point-two times more likely to be admitted with serious infection, and three-point-four times more likely to have in hospital death (2). The ASPEN society has strict objective criteria to define severe malnutrition (3). Recently, the Office of the Inspector General discovered hospitals overbilled Medicare $1 billion by incorrectly assigning severe malnutrition diagnoses codes to inpatient hospital claims (1). Nutritionists identify malnutrition by ASPEN guidelines, however unless it is documented by a physician it cannot be coded and further acted upon. We identified this system as a potential source for monetary losses for the hospital and increased morbidity and mortality for patients.

Objectives
We hypothesize that physician driven resident education on ASPEN criteria and documentation will lead to improvements in resident knowledge about protein calorie malnutrition, and subsequently the rate of correctly identified moderate and severe protein calorie malnutrition.

Methods
The study is an IRB approved mixed retrospective and prospective quality improvement project using Electronic Medical Record, surveys, and resident directed education. Data was collected prospectively and retrospectively on patients admitted in the inpatient or observational setting meeting ASPEN criteria for moderate or severe malnutrition. Firstly, working in conjunction with the IT department EMR alerts were added to all physician progress notes. PowerPoint presentations were given by the author to internal medicine, general surgery, and family medicine residents to educate on newly implemented EMR alerts, ASPEN criteria, and physical exam findings associated with protein calorie malnutrition and pre and post education surveys were given. Patient data was then extracted from the Stamford Hospital EMR and the rate of accurately documented clinical malnutrition was analyzed before and after intervention.

Results/Outcomes/Improvements
Pre and post-test resident surveys were conducted with two common questions, two unique pre-test questions and one unique post-test question. The initial results showed poor pre-education understanding of documenting malnutrition according to ASPEN guidelines by residents (73% poor, n=25, 24% average, n=8) and discomfort with assessing malnutrition based on significant weight loss and edema (20% poor n=7, 79% average, n=27). Understanding improved following resident-guided education assessing malnutrition based on significant weight loss and edema (68% average n=17, 28% excellent n=7, p=.002) and with regards to documentation of ASPEN criteria (56% average, n=14 and 44%, n=11 excellent p<.001). All residents surveyed believed that they would change their practice of documentation of ASPEN guidelines (100%, n=25).

Comparison of correctly identified ASPEN criteria patients did not reach statistical significance before and after intervention.

Significance/Implications/Relevance
Resident nutrition education is currently lacking in medical education. Residents had low levels of confidence in assessing malnutrition according to ASPEN criteria, but those confidence levels improved after education on ASPEN guidelines and documentation practices. As evidenced by current residents reporting confidence levels as average and poor for weight loss and edema, perceptions have not changed over the past decade of medical education. Limited literature exists regarding resident standardized nutrition education. This study focuses on the idea of multidisciplinary education from clinical dietitians working in conjunction with general surgeons to educate residents from all specialties, which has not been previously reported in the literature.

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Poster #20: Patterns of Communication Style Errors in Medical Students and Junior Residents in Early Training

Author(s): Kaitlynn Trinh, Bachelor of Science; Moataz Ragheb, MD, PhD; Eden Robles, PhD

Institution(s): Texas Tech University Health Sciences Center El Paso; Our Lady of the Lake University

Abstract Type: Research-focused

Background
Despite the vital role that empathic communication plays in building rapport with patients, problematic communication patterns remain a problem among medical students and residents [1], [2]. To help improve communication competency in early trainees, residency programs and medical schools have integrated communication workshops into their home curriculum [3], [4]. However, little to no research has been done to see whether the emotionally inhibited and less compassionate communication style is indeed present among medical students and junior residents. Based on anecdotal observations, a knowledge gap was discovered on whether medical students and junior residents adopt a flat, emotionally inhibited, and unempathetic patient interviewing style. To test this hypothesis, we recorded medical students and interns interviewing standardized patients and analyzed the interviews.

Objectives
This abstract is intended for program directors, clerkship directors, and other medical educators interested in developing strategies to improve empathetic, patient-centered communication among medical students and junior residents. The objectives include: 1) Identify subtle patterns of communication errors/deficits in junior trainees while interviewing patients; 2) Become familiar with a structured method of evaluating and documenting those errors; 3) Identify the next steps to improve ineffective communication at the program's home institution and develop general guidelines to address these communication deficits.

Methods
In this qualitative project, we analyzed medical students' and residents' interactions with simulated, standardized patients through recorded video interviews. The interviewers included five third-year medical students and five psychiatry interns. The interviews were independently evaluated by two study investigators and reviewed by the principal investigator. The first analysis was guided by a structured survey tool constructed on standardized psychiatric interview and developed based on the study hypothesis and Communication Theory. The next step was to analyze the videos and transcripts. The study investigators reviewed specific problematic communications and the interviewer's response to the standardized patient's statements and behaviors (especially emotionally charged ones about going through hardship and grief). Specific areas of interest included: 1) direct verbal responses to grief and trauma; 2) nonverbal communication cues responding to grief and trauma.

Results/Outcomes/Improvements
After qualitative analysis of medical students' and residents' interviews, patterns of communication errors were identified. These include avoidance, disengagement, and an absence of empathetic responses (by verbal and non-verbal cues). Avoidance was

characterized by the interviewer moving on quickly to the next question without addressing patient's remarks about grief and trauma (e.g., responding with “How long have you been drinking alcohol?” after the patient expresses grief). The verbal response was characterized by responding to the patient with inappropriate word choices and not addressing the expression of grief directly. The non-verbal response was hallmarked by a lack of changeability in the interviewer’s tone of voice; uttering a flat, monotonous, unemotional voice when the patient talked about emotionally charged topics or events. Additionally, disengagement was identified and characterized by body language during the interview (e.g., putting hands in pockets).

Significance/Implications/Relevance

Communication challenges detected here (avoidance, disengagement, and the absence of empathetic responses), were identified in residents and students in their early clinical years, especially when patients talk about grief and trauma. Recognizing these subtle communication deficits in early training, developing guidelines to address them, and systematically integrating these throughout the home institution curriculum can improve care for our most vulnerable patients.

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Poster #21: Retrospective Study of an Adult Neurology Residency's Implementation of an Academic Half-Day Curriculum

Author(s): Crys Draconi, AA; Sonali Sharma, MD; Mohamed Ridha, MD; Mohammed Wadhah Al-Dulaimi, MD; Joshua Kornbluth, MD

Institution(s): Germane Solutions; John's Hopkins University; Columbia University Medical Center; Yale New Haven Hospital; Tufts Medical Center

Abstract Type: Innovation-focused

Background
It is difficult to obtain a satisfactory, comprehensive, and protected environment for residents with traditional noon conference-based lectures. Few neurology programs have transitioned to an academic half-day curriculum.

Objectives
To present the transition of an adult neurology residency program from traditional noon conference lectures to an academic half-day-based curriculum and its effects on the performance on the Residency In-Service Training Examination (RITE) and the Accreditation Council for Graduate Medical Education (ACGME) Resident Survey.

Methods
The transition began in July 2019 with a mandatory, weekly, four-hour lecture series consisting of formal lectures provided by attending physicians and PGY-4 neurology residents, review questions, and resident development training. The curriculum focused on core topics in adult neurology using various resources. The transition's success was measured by improvement in the residents' RITE scores and ACGME Resident Survey from 2016 to 2021.

Results/Outcomes/Improvements
A preliminary univariate analysis of RITE exam scores using Mann-Whitney method compared RITE scores between PGY years before and after implementation of academic half day. There was an improvement in median RITE exam scores among PGY-2 (51%vs 60%, p=0.020), PGY-3 (55% vs 68% p=0.047), and PGY-4 (63% vs 70% p=0.007).

The ACGME Resident Survey educational content section included "appropriate balance for education," "education not compromised by service obligations," and "provided data about practice habits," among others. This neurology residency program ranked educational content 80.5 in 2016, 72.1 in 2017, 57.4 in 2018, 47.1 in 2019, to an improved 74.2 in 2020, and 68.8 in 2021.

Significance/Implications/Relevance
In conclusion, the academic half-day-based curriculum appeared to improve the residents' response to the "educational content" of the ACGME Resident Survey along with preliminary improvement in RITE exam scores.

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Poster #22: Improving Clinic Continuity: System and Individual Factors

Author(s): Damien Smith, MBBS; Steven Han, MD

Institution(s): Medstar Georgetown / Washington Hospital Center

Abstract Type: Research-focused

Background
An important aspect of Primary Care in a teaching setting is continuity of care between patients and residents either in clinic or during an inpatient admission. Numerous factors interfere with perceived or actual continuity on both resident- and system-levels. Previous work at this site has suggested that early and appropriate contact may help reinforce patient recognition of the resident as their doctor and keep salient who they should make an appointment with. Another possibility is that orders for returning to clinic with explicit instructions for which resident, attending, and timeframe, may allow more appointments to be made with the appropriate resident.

There may also be systems-level factors contributing. Appointments through a central scheduling department may not prioritize existing doctor-patient relationships, while appointments made immediately after a clinic visit with assistance from the clinic staff may result in more clinic continuity.

Objectives
Our aim is to first measure and improve continuity in the resident clinic at the primary teaching site for ambulatory medicine in a large internal medicine residency program, by identifying resident-related and system-related barriers to continuity, and then addressing those barriers. Secondly, it is to build on previous work by measuring and improving prompt patient result notifications.

Methods
All follow-up appointments made over a period of two months in mid-2021 were reviewed. Data were collected on whether the patient saw the same resident within the previous year, or with a member of their inpatient team for hospital follow up appointments; whether an appropriate return to clinic order was included, and if laboratory or diagnostic testing was ordered, the interval between the test and the result notification.

Pre-intervention data were presented in resident didactic sessions. Placing appropriate return to clinic orders was emphasized. A new phone number was created for residents to make appointments directly. A clinic workflow checklist was created, including a return to clinic order. Residents were reminded about notifying patients of results. A hospital discharge follow-up algorithm was implemented, prioritizing continuity with the inpatient team.

Data on the source of follow-up appointments (central scheduling versus within the clinic) were extracted for all visits.

Results/Outcomes/Improvements
Nine hundred sixty-nine follow-up visits were identified in the pre-intervention phase and 630 in the post intervention phase. Pre-intervention, 17% (162) had resident continuity, versus 24% (149) post-intervention ($p < .001$). Pre-intervention, 29% (334) of visits had a return to clinic order placed correctly, 29% (327) had an incomplete order, and 42% (479) had no order placed.

Post-intervention, this improved to 64% (402) with correct orders, 20% (124) incomplete, and there was no order in only 14% (104) of the visits (p<.0001).

Pre-intervention, 137 out of 654 patients (79%) were informed of lab or diagnostic results within 7 days. This improved to 334 out of 380 patients (88%) post-intervention (p <.01).

For all 4,168 patient visits in the timeframe, 58.1% (2421) had a follow-up appointment made. Appointments were made in the clinic for 58.6% (1418), with resident continuity for 72.9%. Only 18.5% (186/1034) of appointments made through central scheduling had resident continuity.

Significance/Implications/Relevance
Educational interventions lead to more frequent notification of patient results in a timely fashion and a high frequency of appropriate and complete return to clinic orders. This also appears to have led to increased clinic continuity. These gains from changes to resident behavior are small but significant. These effects are likely dominated by systems-level effects, however, and highlight the importance of close relationships between administrative and clinical staff. Further interventions to improve continuity from hospital discharge follow-ups are being pursued this academic year.

Poster #23: Implementation of the CIPP Model to Evaluate a Leadership and Quality Improvement Curriculum for Trainees

Author(s): Aanchal Kapoor, MD, MEd; Cecile Foshee, PhD; Arunab Mehta, MD, MEd; Salome Arobelidze, MD, MEd

Institution(s): Respiratory Institute/Cleveland Clinic; Education Institute/Cleveland Clinic; University of Cincinnati, Internal Medicine; Internal Medicine, Cleveland Clinic

Abstract Type: Innovation-focused

Background
Graduate Medical Education emphasizes the role of the annual program evaluation to identify opportunities, create action plans, and track improvements longitudinally. The establishment of the Patient Safety Collaborative in 2019 has motivated multiple training programs to create training curricula on quality improvement (QI). Yet, there is a lack of systematic evaluations of teaching curricula in the literature. Rigorous curriculum evaluation can help the program evaluation committees to weigh the outcomes against overall program goals and provide insights on how to improve the curriculum. The Pulmonary and Critical Care (PCCM) and Critical Care Medicine (CCM) departments at Cleveland clinic implemented a leadership in QI curriculum for the fellows. Appreciating the systematic, structural, and multidimensional approach of Stufflebeam's CIPP (Context, Input, Process, Product) model for evaluation, we used it to evaluate this novel program to provide feedback to the program developers.

Objectives
To apply the CIPP model to evaluate the extent to which the "leadership in QI program" outcomes aligned with the stated program goals and theoretical framework. The CIPP model, given its focus on evaluating different aspects of a program including context, input, process, and product, provides concrete and targeted feedback and hence guides improvement decisions.

Methods
The curriculum for this program is designed to teach leadership and QI competencies to the fellows using QI projects and interprofessional teamwork as the vehicle. Evaluation questions addressing the four CIPP (context, input, process, product) focused areas were created, pilot-tested and revised. The questions were framed towards optimization of the alignment (e.g., program activities with stated objectives; program goals with theoretical perspective; program curriculum with trainee needs) and to gaining information about efficacy of the program in achieving the desired outcomes. To enhance the validity of the results, we triangulated the data gathering approach by administering surveys and conducting interviews and focus groups by random selection from the eligible participants, including 16 fellows, four coaches, five program developers, and 20 interprofessional team members. Qualitative data was transcribed, coded, and categorized into themes aligning with the four aspects of CIPP model.

Results/Outcomes/Improvements
We interviewed nine participants and conducted four focus groups with 20 participants. The surveys provided vital quantitative information that was cross verified with the qualitative data; 22 of the 23 (95.6%) participants completed the survey. The results of qualitative thematic

analysis were organized in CIPP format. The context evaluation of the program revealed that the fellows and faculty were unfamiliar with the guiding principles of the course. The input evaluation highlighted the competing interests that hampered the engagement of the fellows during the evening weekly report-outs. The process evaluation revealed clustering of didactic sessions at the start of the course. The product evaluation stressed the difficulty in completing the QI projects in the allotted timeframe.

Significance/Implications/Relevance

Conducting a robust evaluation of an educational curriculum provides insights into gaps in the various stages of the program implementation. The CIPP model uncovered the difference in perspectives of program developers and other participants in the program. This holistic analysis proficiently communicated the strengths and areas for improvement. Based on the evaluation results we suggested conducting an orientation before the start, extending the course duration and spacing out the reporting sessions based on fellow availability, spacing the didactic sessions throughout the course to provide more time in the beginning to start QI projects and creating multiple tiered goals for each QI project. One of the limitations of the CIPP evaluation model is the time and resources needed for implementation. The time and effort needed for the development of questions, data collection, and analysis should be considered before the evaluation process.

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Poster #24: Assessing Knowledge Retention and Level of Comfort with Obesity Management among Internal Medicine Residents following a Trainee-Led Education Session

Author(s): Ann Forrest, DO; Maria Gabriela Negron Marte, MD; Amanda George, MD, PhD; Stephanie Mayer, MD, MHSc

Institution(s): Indiana University School of Medicine; Virginia Commonwealth University Health System; Virginia Commonwealth University, Central Virginia VA Healthcare System

Abstract Type: Research-focused

Background
As of 2020, the prevalence of obesity in the US adult population was 42.4%. (1) Although obesity management is within the scope of an internist's practice in the primary care setting, physicians report feeling unprepared to address the topic. (2) Many internal medicine (IM) residency programs struggle to include obesity management in their curricula. (3)

Objectives
To assess the knowledge and level of comfort of IM residents when addressing overweight and obesity before, immediately after, and at three months following a trainee-led teaching session on the subject.

Methods
A teaching session on the topic of overweight and obesity was presented in a morning report format for IM residents at a large academic medical center. It was led by a second-year IM resident, an endocrinology fellow, and an attending endocrinologist with expertise on the topic. The session covered the definition of overweight and obesity by body mass index (BMI), associated comorbidities, potential barriers and tools for its management including medication effects, diet, physical activity, as well as criteria for bariatric surgery. A pre-session online survey was administered to the participants to assess their baseline knowledge and level of comfort on the topic. Immediate post-session and three-month follow-up surveys were completed to assess change and knowledge retention. We used Welch's T-test to analyze answers between survey time points.

Results/Outcomes/Improvements
Out of 41 participants, 33 completed the pre-session survey, 25 the immediate post-session survey, and 18 the three-month follow-up survey. At baseline, residents were able to recognize obesity as a chronic medical condition, and contributor to other chronic diseases (response: 4.55/5 on Likert scale); they were also willing to address the topic in their primary care clinic (response: 3.85/5). There were increases between the pre- and immediate post-session surveys in recognizing BMI cutoffs and qualifying criteria for bariatric surgery ($p<0.001$), level of comfort offering dietary advice ($p<0.01$), and awareness of tools for obesity management ($p<0.01$). In the three-month follow-up survey, there was retention of BMI cutoffs and nutrition service availability, however there were partial losses in knowledge, including criteria for bariatric surgery and where to find obesity management tools ($p<0.01$).

Significance/Implications/Relevance
Internal medicine residents are willing to address overweight and obesity if provided with education and tools. A trainee-led teaching session in a morning report format can increase residents' knowledge and level of comfort when addressing overweight and obesity, without

overburdening the curriculum. Further study may reveal that spaced review of the topic would overcome the partial knowledge losses seen in our IM resident population.

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Poster #25: An Innovative Solution to Collecting, Quantifying, and Synthesizing Resident Education Progress

Author(s): Rimma Perotte, PhD; Paarth Raj, DO; Joseph Underwood, MD, MHCDS; Christina Hajicharalambous, DO, MSEd, MS

Institution(s): Hackensack University Medical Center

Abstract Type: Innovation-focused

Background
The Accreditation Council for Graduate Medical Education provides medical specialty-specific milestones as a means to gauge residents' development throughout their training. Gauging residents' progression through the Milestones typically involves a formative and summative evaluation process. The evaluation process presents the following problems: gathering evaluations from the teaching physicians working the clinical shifts with residents, data aggregation, and timely dissemination of information to both residents and residency leadership. Often, gathering evaluations (especially real-time post-clinical shift evaluations), aggregation of this data, and assessing resident performance at various checkpoints is a manual, difficult, and time-consuming process.

Objectives
It is vital for residents to receive timely feedback on their clinical performance and it is crucial for the medical education team to have a clear way to track resident progress. As residents work many shifts with many different attendings, gathering a holistic view of resident performance depends on gathering evaluations from many different attendings.

To address these challenges, we aimed to gather end-of-clinical-shift evaluations as both quantitative and qualitative feedback from as many attending clinicians as possible. We wanted to create a system to summarize and display relevant data at useful intervals and in different formats for both educators and students.

We therefore designed a simple-to-use infrastructure to facilitate high-quality real-time formative and summative feedback gathering and to automate feedback dissemination at defined intervals, fast-track concerns about residents, and present a dashboard for up-to-date progress monitoring of resident performance.

Methods
The created system has two parts, a fully automated data gathering part and a fully automated data dissemination part. To gather the evaluations we have a customized Google Form. This form was created to ask Milestone-specific questions without overwhelming the evaluator; therefore, depending on the day of the week, the evaluator was asked to assess different clinical categories. Within each category, each milestone level was presented with a definition to assist with standardizing evaluations.

The data was disseminated in three different ways: 1) if a confidential comment was entered, an immediate email was sent to the residency leadership, 2) at the end of each rotation period, each resident received a personalized email with all non-confidential comments for that rotation, and 3) for the semi-annual resident progress review meeting, a dashboard was automatically created based on the summary of all attending evaluations in each category.

Results/Outcomes/Improvements
In 14 months, we received over 1,350 real-time assessments across 36 attendings. This resulted in a mean of 40 evaluations per resident (range: 20-72). This is a 300% increase vs the previous method (paper handouts given to attendings by residents at the end of shift). The system has automatically sent over 70 confidential comment emails, emailed each resident 16 rounds of rotation comments, and facilitated three semi-annual resident progress meetings. End-of-shift evaluations were summarized to guide the milestone grade assignment during semi-annual resident progress meetings (only 16 of 22 milestones could be commented on in the end-of-shift evaluations). Each resident's quantitative evaluation data was averaged to get a summative number for each milestone. End-of-shift formative and qualitative evaluations were used to drive the conversation for each resident. During the progress meeting, a mean of six grades per resident were altered from the end-of-shift evaluation mean (range: 1-12)

Significance/Implications/Relevance
Our new infrastructure for resident milestone tracking created a more informed department; where both residents and their leadership team are fully aware of individual resident strengths and weaknesses, and all attendings are aware of educational standards.

We believe this innovation is highly beneficial and relevant to all residency programs. We found that digitally gathering evaluations with automatic functionality to inform both residency and leadership can be a great way to involve all attendings in resident progression tracking.
The Google tools used include Forms, Sheets, Gmail, and AppsScript. Privacy and security concerns are inherently addressed by working within an enterprise-wide secured instance of Google Workspace. The system is fully reproducible in other departments and institutions with a similar infrastructure. After initial design and implementation, there is no upkeep necessary.

Poster #26: The Competency-Based Mid-Career HPM Fellowship: Core Components and Lessons Learned

Author(s): Laura Dingfield, MD, MSEd; Mollie Biewald, MD; Andre Cipta, MD; Karen Blackstone, MD

Institution(s): Perelman School of Medicine at the University of Pennsylvania; Icahn School of Medicine at Mount Sinai; Southern California Permanente Medical Group; George Washington School of Medicine & Health Sciences

Abstract Type: Innovation-focused

Background
Despite significant expansion of traditional Hospice and Palliative Medicine (HPM) physician training programs over the past five years, the clinical, academic, administrative, and research demands for Board certified HPM physicians remain largely unmet. While many mid-career physicians report interest in HPM practice, they may be unable or unwilling to enroll in traditional 12-month, full-time fellowship programs. With the hope to strengthen the current and future HPM physician workforce, the Accreditation Council for Graduate Medical Education (ACGME) and American Boards of Internal Medicine, Emergency Medicine, and Family Medicine approved a pilot part-time, time-variable, competency-based HPM fellowship program for mid-career physicians in 2019. The Mid-Career HPM Fellowship embraces core components of competency-based medical education to meet the unique needs of practicing physicians choosing to simultaneously pursue HPM specialty training over multiple years.

Objectives
The aims of the Mid-Career HPM Fellowship innovation pilot are to:
1) Test the feasibility and acceptability of competency-based, time-variable training programs for mid-career physicians;
2) Develop and implement a program of assessment using fit-for-purpose evaluation tools to measure progress toward entrustment in core specialty competencies;
3) Determine time to competence and achievement of specialty specific competencies for mid-career physicians; and
4) Measure the impact of the innovation on traditional HPM fellowship programs at participating sites, including learners not involved in the innovation, and on the institution.

Methods
The Mid-Career HPM Fellowship was approved through the ACGME Advancing Innovation in Residency Education (AIRE) program, and includes seven participating sites across the country. The Knowledge to Action (KTA) Framework was used as a conceptual framework to guide implementation, program evaluation, and rapid-cycle improvement of the Mid-Career HPM Fellowship across all sites. A Mid-Career HPM Fellowship Committee composed of program directors and core faculty at all participating sites was constituted to oversee the implementation and evaluation of the program. The Committee selected and refined fit-for-purpose tools that are used to assess mid-career fellows at all participating sites. The Committee implemented a Combined Clinical Competency Committee to evaluate individual fellow progress through the training program, and to make high-stakes decisions about timing of graduation based on mastery of core competencies.

Results/Outcomes/Improvements
To date, 17 fellows have participated in the Mid-Career HPM Fellowship. Four fellows have met graduation requirements and will take the initial certification exam in the fall of 2022. Graduates have spent between 12-24 months in training. Using the KTA Framework, improvements have been made to assessment, curricular organization, and processes for determining graduation. Lessons learned from the pilot include: (1) consideration of local context is key to successful implementation, (2) learner-specific curricula are essential for mid-career trainees, (3) innovative assessment strategies, including cross-site collaboration, add value in competency-based programs, and (4) creation of transparent mechanisms to make decisions about developmental progress and graduation are beneficial to both fellows and program directors. Initial results indicate that the Mid-Career HPM Fellowship has positive impacts on trainees in traditional training programs and participating institutions.

Significance/Implications/Relevance
The Mid-Career HPM Fellowship is a ground-breaking multi-site pilot program that has successfully implemented a competency-based specialty training for practicing physicians. The program has graduated four fellows from three different programs, suggesting that the model is both feasible and generalizable across multiple contexts. The Mid-Career HPM Fellowship offers a scalable model and potential solution for other medical specialties facing workforce deficits, including geriatrics and addiction medicine. Furthermore, lessons learned about the implementation of competency-based training may be applicable to traditional graduate medical education programs in other medical specialties.

Poster #27: Improving Trainee Engagement in Incident Reporting: A Team-Based Approach to Education and Outcome Sharing

Author(s): Rajan Arora, MD; Jacqueline Leja, MD; Deborah Niedbala, RN, MSN, CEN, CPHQ, CPSO, CPPS; Yvonne Friday, MD

Institution(s): Children's Hospital of Michigan

Abstract Type: Innovation-focused

Background
Incident reporting system is integral to improving patient safety and quality of care. Trainee engagement is vital. As frontline providers they can bring into focus both latent conditions and active failures. The extent of participation of pediatric trainees and concerns raised by them is not well documented.

Objectives
The study has two primary objectives. First, to describe and analyze incidents logged in the institutional incident reporting system by the pediatric trainees. Second, to explore if ongoing education and feedback by a designated Incident Reporting team improves trainee incident reporting.

Methods
We prospectively analyzed incidents reported by our trainees from November 2020 – June 2022. We are a quaternary care academic children’s hospital that employs a confidential, voluntary, and web-based incident reporting system. In general, the incidents are forwarded to the leader of the location where the event occurred. The leader reviews, investigates and identifies improvement/coaching opportunities for the incident in question. For this endeavor, the trainees were given a presentation on when and how to complete an incident report. Additionally, a multidisciplinary incident reporting team was created to review and analyze trainee specific incident reports. The main outcome measures included type of incident, non-patient-related contributing factors and their impact. Information was shared during monthly graduate medical education meetings to provide feedback and foster an incident reporting culture.

Results/Outcomes/Improvements
The number of incident reports was nearly twice in the study vs. baseline period (122 vs. 64). Majority (73; 60%) were related to perceived issues in clinical care (treatment delay: 31; delayed testing: 19; inappropriate disposition: 9; suboptimal monitoring/treatment: 9; device- related: 5), followed by transition/sign-out issues (20; 16%), professional conduct (9; 7%), and medication/imaging errors (8; 7%). System-related issues were noted to be the most common (49; 40%) contributing factors followed by human failures (29; 24%) and communication breakdown (25; 21%). In 10 (9%) incidents, the underlying cause were deemed to be primarily illness or a device related complication. Provider and/or system-related factors negatively impacted patients in more than half (70; 57%) of the incidents (delay in care: 48; unwarranted or repeat testing/treatment: 11; additional monitoring: 5; and escalation of care: 6). None of the incident was associated with severe harm or death.

Significance/Implications/Relevance
A comprehensive review of trainee incident reports and longitudinal feedback can increase effectiveness of incident reporting systems. It favorably impacts trainee engagement and can provide valuable guidance for targeted improvements.

Poster #28: Stop, Collaborate, and Listen: Creating a Culture of Coordinator Collaboration and Mentorship through the Formation of a Subspecialty Organization

Author(s): Kelly Maas, MHPE, BS, C-TAGME; Sarah King, MS, C-TAGME; Meredith Feldman, BS, Graduate certificate in leadership; Ashley Bonham, BS, C-TAGME; Amanda Ross, BS, C-TAGME; Nancy Baumgartner; Amy Vezzetti, BA; Ashley Przybylski, BSHR; Deb Parsons, C-TAGME

Institution(s): University of Rochester Medical Center/Golisano Children's Hospital; Children's Mercy Kansas City; The Children's Hospital of Philadelphia; Johns Hopkins All Children's Hospital; Connecticut Children's/University of Connecticut; McGaw Northwestern University/Lurie Children's Hospital; University of Pittsburgh Medical Center; University of Michigan; St. Christopher's Hospital for Children; Indiana University

Abstract Type: Innovation-focused

Background
In 1991, the Neonatal-Perinatal Medicine (NPM) Fellowship Directors established the Organization of Neonatal-Perinatal Medicine Training Program Directors (ONTPD), where fellowship program directors share best practices. A group of NPM coordinators recognized the need to create a similar organization and in August of 2020 18 NPM coordinators joined together to create the Organization of Neonatal-Perinatal Medicine Training Program Coordinators (ONTPC). The mission of the ONTPC is to collaborate nationally with all NPM coordinators to enhance and increase knowledge of Neonatal-Perinatal Medicine subspecialty fellowship training programs, and specifically to create of best practices and mentorship. Over two years the ONTPC has grown into a 75-member organization.

Objectives
Determine members' perceptions of the significance of collaboration topics specified for quarterly organization meetings and identify additional areas of improvement significant to the ONTPC.

Methods
Fifty-six NPM coordinator members of ONTPC were asked to voluntarily complete a survey consisting of six, five-point Likert scale questions and two open comment questions covering the significance of collaboration topics, quality of meetings, availability of networking/mentorship and resources that ONTPC has provided to date. Surveys were distributed electronically via REDCap software. Consent to participate was implicit in completion of the survey. Descriptive statistics were used to analyze response.

Results/Outcomes/Improvements
Thirty-two coordinators completed the survey (57% response rate). Survey results revealed that 53% of respondents reported occasionally attending and 31% reported always attending general body meetings. Three-quarters of respondents reported having expanded their professional network through ONTPC. 34% of respondents reported gaining knowledge through ONTPC, and 41% of respondents rated their level of confidence in their role as increased after joining ONTPC. Based on best practices shared through presentations or discussions, 28% of respondents reported having suggested and/or implemented administrative program changes.

After joining ONTPC, 28% reported a decrease in stress. In free-text comments, respondents supported overall themes of increased quality resources and programming and of appreciation for collaboration between coordinators.

Significance/Implications/Relevance
The ONTPC provides the opportunity to improve collaboration across multiple institutions, improve coordinator wellbeing, provide coordinator mentorship, and to develop and initiate best practices. The advancement and sustainability of ONTPC provides a venue for professional and personal growth for NPM coordinators.

Poster #29: How Our GME Made 200+ New "Besties" during Onboarding – A Virtual Orientation Session Saga

Author(s): Margarita Menapace, BS; Erin Walker, MA, MEd; Taylor Whitenight; Hope Vaughn, BA

Institution(s): Geisinger

Abstract Type: Innovation-focused

Background
Each year Graduate Medical Education (GME) seeks to better the Onboarding and Orientation process for incoming residents and fellows. For the 2021-2022 academic year, the GME office onboarded 191 new learners and responded to 1,072 emails regarding Orientation and Onboarding. For the 2022-2023 academic year, the GME office revised Onboarding instructions to address the common questions and concerns of incoming learners. In order to reduce the direct communication between the GME office Education Specialists and new incoming learners, virtual onboarding sessions were implemented. These sessions included different themes to introduce the incoming residents and fellows to GME and better assist with onboarding requirements. The goal of these sessions was to proactively respond to common questions and reduce direct communication with the GME office during Onboarding and Institutional Orientation.

Objectives
Decrease the total number of direct communications from incoming learners by providing informational and open forum virtual sessions with the GME Education Specialists.

Methods
Ten one-hour sessions were developed and offered to incoming learners via email. These sessions included, ‘Welcome to GME (offered twice), ‘Visas’, ‘Diversity Initiatives’, ‘Area Resources’ (offered twice) and four virtual ‘Question & Answer’ sessions. Two Education Specialists from the centralized GME Office presented the virtual sessions via Microsoft Teams. “Welcome to GME” introduced the onboarding process and expectations and was created to proactively answer common questions received in previous years, as well as provide the incoming learners with an idea of what to expect during onboarding. This session was highly encouraged to attend. At the conclusion of the onboarding season, incoming learners were surveyed on their experience and participation. Data was collected to measure the total number of emails answered by the GME office to compare with the previous academic year.

Results/Outcomes/Improvements
For the 2022-2023 academic year, GME onboarded 228 learners and responded to 919 emails. 67 survey respondents out of 228 (29%) learners for the 2022-2023 onboarding season included 44 PGY-1 incoming new learners, and 23 PGY-2 and above incoming advanced learners. Incoming learners who attended a virtual orientation session were more likely to initiate direct contact with the GME Education Specialists (61.19% total; 65.91% new learners; 52.17% advanced learners). Those who did not attend any virtual orientation sessions were less likely to initiate direct communication (11.94% total; 9.09% new learners; 17.39% advanced learners). 82.09% of total respondents reported that they attended one or more of the virtual

orientation sessions, with the most attendance at “Welcome to GME” (80.60% total; 90.91% new learners; 60.87% advanced learners) and “Virtual Onboarding Q&A” (35.82% total; 38.64% new learners; 30.43% advanced learners) respectively.

Significance/Implications/Relevance
For the 2021-2022 academic year, the GME office onboarded 191 new learners and responded to 1,072 emails. After implementing the Virtual Orientation Sessions for the 2022-2023 academic year, the number of new learners onboarded by the GME office increased by 47 learners, however the number of emails decreased by 153 total emails. While implementation of Virtual Orientation Sessions has decreased the overall quantity of emails initiated by incoming residents to the GME Education Specialists, 61% of new incoming learners who attended a virtual session also initiated direct contact with the GME office. This study suggests early contact with the GME Education Specialists through the Virtual Orientation Sessions provided familiarity, security, and psychological safety, which resulted in an increase in communications on an individual level. Additional pre-Orientation support may need to be explored to assist learners with orientation and onboarding requirements on an individual basis.

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Poster #30: A Year in Reflection: Program Coordinator Training and Development

Author(s): Melissa Perry, MEd, C-TAGME; Kendra Armijo, MS, C-TAGME; Lisa Bailey, BBA, C-TAGME; Rhoda Bryant, C-TAGME; Nikita Daniel, MBA, BS; Rebecca Davis, BA, C-TAGME

Institution(s): University of Texas Southwestern Medical Center

Abstract Type: Innovation-focused

Background
ACGME recognizes program coordinators as critical to the success of the program, therefore a substantial focus on coordinator development is essential. Historically, our institution has primarily relied on programs to provide on-the-job training to new coordinators which led to inconsistent practices and variable depth and breadth of training. To address this, the GME office made concerted efforts to provide training and education to coordinators through the creation of a coordinator development series. The success of this initiative was limited by the ability to reach our broad audience given varying levels of graduate medical education (GME) knowledge and experience. We realized we needed an approach specifically tailored to each level of coordinator competence progressing from novice to proficient. However, the onset of the COVID-19 pandemic presented additional challenges with the sudden shift to a work-from-home environment.

Objectives
The aim of this project was to overcome the challenges and barriers associated with program coordinator training and development within a large GME enterprise. The primary objectives of this initiative were to address:
•varied training methods utilized by programs
•training needs of a broad group of coordinators in various stages of competence
•challenges presented by the remote working environment

Methods
GME paired seasoned coordinators and GME professionals to work in teams developing content for a standardized coordinator training curriculum. This curriculum is being rolled out in phases with the initial phase designed to help new coordinators acquire the knowledge, skills, and attitudes necessary to master their roles as GME professionals and program leaders. To address the limitations of the remote working environment, we partnered with our medical school to utilize the University's Learning Management System. The curriculum is delivered in a virtual classroom setting that combines synchronous and asynchronous learning models and is broken down into three semesters. Participants are enrolled in cohorts that progress through the curriculum together with new cohorts beginning each quarter.

Results/Outcomes/Improvements
This project has achieved the primary objective of establishing a standardized method of training for coordinators. The second objective has been addressed by separating the coordinators into groups based on their level of experience allowing us to provide content tailored to their specific training needs. Applied knowledge is measured using pre-and post-semester assessments and is evident by participant engagement in course content. We

achieved success with the final objective by mitigating the impact of delivering training to coordinators in a remote work environment using an online learning platform.

Significance/Implications/Relevance

With the launch of the curriculum in October 2021, we were able to overcome the previously stated obstacles with program coordinator training at our institution. Over the course of the inaugural year, additional barriers, opportunities, and further implications were recognized in facilitating the successful completion of our program coordinator training. As cohorts complete the curriculum and additional data is collected, the extent of the impact on coordinator development will become more evident. Coordinator competence is being measured using milestones created specifically for program coordinators and is part of the data set collected. We look forward to collaborating with other GME stakeholders on additional ways to improve the quality of coordinator training at the national level.

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Poster #31: The Doctoring Game: Which Doctor Do You choose? Doctor # 1, Doctor # 2…

Author(s): Leanne Forman, MD; Gagganpreet Singh, MS 2; Aaron Schluger, MD; Erica Rotundo, Advanced Nurse Practitioner; Rebecca Glassman, MD

Institution(s): William Carey University School of Osteopathic Medicine; Westchester Medical Center

Abstract Type: Innovation-focused

Background
Gamification is a powerful tool for medical educators. It provides an engaging way to acquire knowledge and clinical skills. Evidence suggests this technique enhances learning behavior and attitude towards learning, which results in improved learning outcomes (1). The identification of which skills are best taught using gamification is ongoing (2). After a needs assessment, it was determined the goal would be to advance both their communications skill and t medical knowledge in areas they self-identified as lacking confidence. We developed the concept of the "Doctoring Game" based upon the TV game show the "Dating Game." We began with gender specific health topics (dysfunctional uterine bleeding, polycystic ovarian syndrome, testosterone replacement and treating erectile dysfunction in a patient with prostate cancer), and further expanded the platform to additional high value cases, including communicating cancer results and educating a patient with a new diagnosis of diabetes.

Objectives
1. Provide learning opportunities to improve communication and knowledge
2. Increase resident exposure to less commonly experienced, but high value, clinical scenarios
3. Create high-value activities that engage residents and allow direct faculty assessment of their skills
4. Provide time efficient methods for direct observation of residents' communication skills

Methods
Residents were expected to complete five communication modules through the Center to Advance Palliative Care (CAPC) and review the topic specific material and cases. Questions were posed in real time during the simulated patient encounter. Clinicians with communication expertise from the Palliative Medicine service provided role play and judging with direct feedback for the topic of communicating difficult news. A registered nurse with experience in diabetic education provided role play for the topic of diabetes education.

For each session, medical residents were divided into teams of three with one from each PGY level. The teams competed against each other and were evaluated with a grading rubric. Following each session, groups received specific feedback from session facilitators with an explanation of the selection of a winning team. Following these sessions, residents received individualized constructive feedback, and completed anonymous surveys evaluating the exercise.

Results/Outcomes/Improvements
We collected a total of 50 surveys. Eighty-four percent reported they preferred this method of education over traditional lectures, with an enjoyment rating of 8.34/10 and advancement of individual communication skills at 8.2/10. Comments included: found benefits to viewing differing techniques and communication styles, enjoyed the team-based competition aspect, highlighted the value of immediate

feedback. The majority said they wanted more of the doctoring game and several commented it helped them identify their own learning needs to a much larger degree. The minority who stated they didn't prefer this format expressed that they would prefer it in small group settings. An unexpected comment was residents reported it helped them identify counseling deficits they had and weren't aware of.

Significance/Implications/Relevance

Our residents strongly prefer skill driven exercises-especially ones they perceive advance their knowledge and professional abilities. The doctoring game allowed for the dissemination of practical knowledge and direct observation of communication skills in a medium sized group with less faculty time per learner observed-two to three facilitators can run each session. Feedback can be provided to 15 residents per one-hour session. It allowed us to deliver specific content that residents had voiced less confidence in. Future sessions will be focused on pre-exposure prophylaxis, gender affirming care and inpatient topics such as discussion of goals of care.

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Poster #32: It Takes a Village: A Peer Review Approach to Program Improvement

Author(s): Betty Staples, MD; Charles Woodard, MD; Jessica Burkhart, MHA, CTAGME; Catherine Kuhn, MD

Institution(s): Duke University Hospital and Health System

Abstract Type: Innovation-focused

Background
The Next Accreditation System, implemented in July 2013, transitioned training programs from periodic external assessment to continuous institutional oversight.[1] Programs communicate information to the review committee primarily through the Accreditation Data System (ADS) report. Internally, programs complete the Annual Program Evaluation (APE) and generate an annual action plan.[2] The APE is one step in a process towards continuous program improvement.[3] At our institution, we have created a peer review process using appointed educational competency committees to conduct the APE since NAS began.[4] We have adapted our practice to include more members of the GME community and fewer GME office staff. Additionally, with the engagement of our GMEC Accreditation Subcommittee, we have developed a peer review process for review of the annual ADS updates (prior to DIO review and approval) and participate in the special review process.

Objectives
•Identify an institution-driven process for continual programmatic improvement that prepares program leadership for their ACGME self-study using a multi-rater model involving key stakeholders [program directors (PD), associate program directors (APD), core faculty, program coordinators (PC), and trainees]
•Provide transparency to the accreditation process for trainees
•Identify and share best practices between programs.

Methods
Between 2013-2022, the Office of GME (OGME) developed an APE process utilizing a multi-rater review process. The APE evaluation form addresses the common program requirements and mandates a program action plan. Review teams consisting of PDs, APDs, core faculty, PCs and trainees review all ACGME accredited programs and provide feedback to each program, as well as a recommendation to OGME regarding the need for a further follow up discussion with program and GME leadership, or special review. In 2021 the Accreditation GMEC subcommittee was formalized. Members of this committee include peer-selected trainees, PDs and APDs. These individuals assist with ADS Annual Update reviews, participate as team members for APE reviews, and participate in the special review process. The Accreditation Subcommittee Chair, Accreditation Manager, Associate Director of GME, and DIO provide oversight of the process.

Results/Outcomes/Improvements
From 2013-2022 the number of ACGME-accredited programs that were reviewed increased from 82 to 103. The number of review teams increased from 12 to 25. The total number of individuals involved in APE review has varied between 48-90 with a mean of 69. This has included an average of 17.8 PDs, 18.1 PCs, 16.3 core faculty, and 17.8 trainees. GME Office staff no longer participate in these reviews, but conduct a secondary review of material for consistency prior to selection of programs for special reviews. In 2021 the GMEC Accreditation subcommittee which included seven-nine faculty, two-four residents,

and two GME Office members reviewed 100-103 ADS submissions before final review and approval by the DIO. To date, one APD has participated in a special review follow up with plans to expand this cohort in the future.

Significance/Implications/Relevance

There are several positive implications of the multi-rater peer review approach to annual institutional accreditation review. Programs benefit from feedback from multiple individuals and from diverse perspectives. The workload is managed beyond the OGME which allows feedback to be timelier and more robust. Best practices are shared among and between programs on an ongoing basis. Involving trainees has given them an increased awareness of ACGME policies and procedures. Additionally, the goal of aligning the APE process with future self-studies better prepares programs for this process. Future goals are to include members of the GMEC subcommittee with the special review process to enhance peer involvement in this critical step toward program improvement.

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Poster #33: An Evaluation of Program Support for the Appropriate Implementation of Osteopathic Recognition into Residency Programs

Author(s): Yvette Gross, DO; Michelle Chadek, MS; Russell Maier, MD FAAFP

Institution(s): Multicare Tacoma Family Medicine Residency; Pacific Northwest University College of Osteopathic Medicine

Abstract Type: Research-focused

Background
In 2015 Osteopathic Recognition (OR) began as “a designation conferred by the ACGME’s OR Committee upon ACGME-accredited programs that demonstrate, through a formal application process, the commitment to teaching and assessing Osteopathic Principles and Practice (OPP) at the graduate medical education level.” This was introduced as a commitment to osteopathy in the time of the transition to a single accreditation system finalized in 2020. Specific requirements for OR are overseen by a Director of Osteopathic Education (DOE) and at minimum one other osteopathic faculty. The commitment to OR includes meeting requirements that entail specific osteopathic evaluations and scholarly activity for both faculty and residents, curriculums, and integration of OPP into patient care settings. There is no available data to evaluate programs with osteopathic recognition providing assistance in administrative support, salary or time for the DOE or faculty for appropriate implementation into programs.

Objectives
The study was designed to understand administrative trends in DOE and osteopathic faculty’s additional time, salary, administrative support, etc. required for osteopathic recognition accreditation and/or osteopathic-focused residency education and activities The WWAMI Family Medicine Residency Network is a group of 32 family medicine residency programs related by university affiliation and geography, located within Washington, Wyoming, Alaska, Montana, and Idaho.

Methods
An anonymous online survey was sent to Directors of Osteopathic Educations or Program Directors of the residency programs within the WWAMI Family Medicine Residency Network.

Results/Outcomes/Improvements
For the first time we have data on the time, effort, and resources DOEs and osteopathic faculty need to run/manage/operate a OR accreditation and osteopathic-focused graduate medical education. The results indicate that 14 of the 32 FMRN programs responded with a 44% return rate. Nine of the 14 (64%) respondents had Osteopathic Recognition. The results showed that programs with osteopathic recognition allocated time for ACGME required osteopathic scholarly activity 11% of the time, 22% of osteopathic faculty were allotted additional CME and 33% were given additional funding for the DOE position.

Significance/Implications/Relevance
This study indicates that added time requirements and resources are needed to adequately support the implementation and continuation of osteopathic recognition programs and osteopathic-focused residency education. Further research is needed to capture a national level respondent rate to understand administrative trends in DOE/Osteopathic Faculty and ACGME OR.

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Poster #34: Bolstering the Rural Physician Workforce in Underserved Communities: Are Rural Residency Planning and Development Programs Finding the Sweet Spot?

Author(s): Emily Hawes, PharmD, BCPS, CPP; Molly Ormsby, MA; Erin Fraher, PhD, MPP; Mark Holmes, PhD; Cristen Page, MD, MPH

Institution(s): University of Washington, Department of Family Medicine, WWAMI Network; The University of North Carolina at Chapel Hill, School of Medicine, Department of Family Medicine; UNC Gillings School of Public Health, Department of Health Policy and Management; University of North Carolina at Chapel Hill, School of Medicine

Abstract Type: Research-focused

Background
The rural-urban mortality disparity tripled between 1999 and 2019. One proven strategy for addressing these widening disparities is increasing physician supply in rural communities. Recognizing that training physicians in rural communities can bolster local workforce supply, the Health Resources and Services Administration (HRSA) developed the Rural Residency Planning and Development (RRPD) Program. RRPD provides start-up funding to develop new allopathic and osteopathic residency programs in rural communities. In 2019 and 2020 HRSA funded a total of 36 grantees in Family Medicine (n=28), Internal Medicine (n=3), and Psychiatry (n=5). The 36 sponsoring institutions operate 67 distinct rural sites spread across 40 counties in 24 states.

Objectives
This study describes the demographic, socioeconomic, and health status of the communities that received RRPD funding compared to counties that do not currently have RRPD training programs. These data provide valuable insights into the characteristics of counties where a rural residency could be successful.

Methods
We conducted a bivariate analysis comparing the characteristics of the 40 counties with RRPD programs to the 1,932 non-metropolitan counties in the US that do not currently have an RRPD program. This analysis included county-level data on population characteristics including population size, population density, % of the population in poverty, Persistent Poverty Typology Code, % < 65 without Health Insurance, % Persons Below Poverty Level, # of hospital beds, % 65 and over, percent non-white or Hispanic, % Medicaid eligible, and the ratio of primary care physicians per 10K population. We performed a logistic regression predicting whether a county was an RRPD site as a function of population, the primary care per population ratio, and the social vulnerability index from the University of Wisconsin Atlas.

Results/Outcomes/Improvements
RRPD counties are more populous ($p< 0.01$), have higher population density ($p< 0.05$), and a higher percentage of the population that is non-white or Hispanic ($p< 0.05$) compared to non-RRPD counties. Counties where RRPD residents are training, are more likely to have a hospital ($p< 0.05$), have more hospital beds ($p< 0.01$), and more primary care physicians per 10,000 population ($p< 0.05$) than rural counties that do not have an RRPD training program. The PCP

ratio that generates the highest probability of being an RRPD site is roughly 10.3 physicians/10,000 population.

Significance/Implications/Relevance

The small size and remoteness of rural programs make them susceptible to challenges such as inadequate patient volumes, lack of sustained funding, difficulty recruiting faculty, and lack of preceptors. These barriers may be best overcome in “sweet spots” for rural residency training where there is a large enough patient population, higher population density, and higher ratios of primary care physicians to population but are also rural areas with relatively high socioeconomic needs. The higher ratio of PCPs in RRPD counties indicates that necessary infrastructure is in place to equip programs for success. This enables RRPD programs to achieve HRSA’s mission to address the needs of the “populations who are medically, economically, or geographically vulnerable.”

RRPD sites appear to represent a “sweet spot” of rural counties that could most succeed: they have the population and physician supply to support GME but have high socioeconomic needs.

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Poster #35: A Web-Based Platform Supporting Affinity-Based Mentorship for Medical Students and Trainees from Backgrounds Underrepresented in Medicine

Author(s): Kelsey Fath, MD; Tera Howard, MD, MPH

Institution(s): University of Texas Austin

Abstract Type: Innovation-focused

Background
In 2004, the AAMC defined underrepresented in medicine (URM) as racial and ethnic populations that are underrepresented in medicine relative to their numbers in the general population[1]. Subsequently, the 2019 AAMC Diversity in Medicine report showed that of the active physician workforce, only 5% are Black, 5.8% are Hispanic, and 0.3% are American Indian[2]. Studies show that URM students and residents face unique challenges compared to their majority counterparts, including but not limited to their overall medical school experience[3], mistreatment based on race during residency[4], and less supportive academic environments as attending physicians that affect their ability to be promoted[5,6]. Research has shown that mentorship plays an important role in personal development, career choice, productivity, grant success, and publication success[7]. For this reason, meaningful mentorship may be an important tool to help URM's overcome the unique social and academic barriers they face in medicine.

Objectives
To develop a web-based platform connecting URM students and trainees to affinity-based, meaningful mentorship from faculty mentors at our institution. Based on lessons learned from the pilot program at the University of Alabama, our program seeks to expand the mentor pool to include non-URM faculty. Doing so will (1) mitigate the reality of low numbers of URM faculty available for mentorship in all fields[8] and (2) reduce the "minority tax" on URM faculty by spreading the responsibility of mentorship across all trained faculty.

Methods
Launched in May 2022, Dell Med Connect (DMC) is a web-based platform on the intranet at the University of Texas Austin (www.connect.dellmed.utexas.edu). Students and trainees in search of mentorship (1) access the platform and initiate a search based on one or more selection criteria and (2) contact the mentor to initiate a relationship directly from the platform. Minimum requirements for faculty mentors were implemented to ensure the recruitment of quality mentors, specifically by receiving high scores on learner evaluations or being nominated by departmental educational leadership. Negotiations with Dell Medical School subsequently allowed formal recognition for faculty mentors towards the mentorship criterion for promotion. Mentors are also eligible to receive CME credit for the completion of training modules. After viewing the virtual training modules, faculty and trainees meet to define the parameters of the mentorship relationship, which will be evaluated on a semi-annual basis.

Results/Outcomes/Improvements
The deliberate design of Dell Med Connect resulted in the recruitment of 100+ diverse mentors for the program representing 17 specialties, 30 subspecialties, four racial identities, three sexual orientations, four native languages, 29 home states, and four home countries – all with an array of professional and outside interests and expertise. To date, the platform has been accessed by 190 new users and at least 15 mentorship relationships have been established. Additionally, faculty mentors have received CME credit for completing approximately 90 training modules.

The Kirkpatrick model will be used to evaluate the program further over time with survey data. Specific mentor and mentee project outcomes will be monitored pertaining to satisfaction, measures of learning, behavior change, and long-term results.

Significance/Implications/Relevance

This has been deemed a very successful web-based platform thus far. Not only is it connecting URM students and trainees with affinity-based faculty mentors, but large numbers of URM and non-URM faculty mentors are involved and receiving recognition for their efforts. Further data will need to be compiled over time as indicated above. In addition, efforts are being made to ensure continued engagement with the program as well as accountability of mentors and mentees to complete their surveys and evaluations. Overall, we believe that this program would have widespread applicability across academic institutions. Current efforts are underway to create a shareable version of this platform so that larger numbers of URM students and trainees across the country can access meaningful mentorships within their own institutions.

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Poster #36: Innovation in Mentorship among Medical Trainees: Pilot Virtual Peer Support System for Physicians during On-Boarding Transition to Residency

Author(s): Alaa Elnajjar, MD; Gerardo Carino, MD; Kelly Holder, PhD

Institution(s): Brown University; Lifespan; Warren Alpert Medical School

Abstract Type: Innovation-focused

Background
Burnout is a problem facing medical organizations both at the individual and institutional levels. Mentorship in residency has been shown to play a crucial role in professional growth, development, and mental wellbeing. Furthermore, as mentoring has helped tackle burnout in recent years, it is now becoming an integral part of healthcare organizations.

The primary author gave emotional support groups for ICU residents at Montefiore Medical Center during the COVID-19 pandemic, followed by organizing a virtual onboarding summit for medical trainees that had 400 registered attendees. This was followed by joining the ACGME wellbeing workforce in 2021, and conducting research with the Graduate Medical Education (GME) office at Montefiore Medical Center regarding peer support and access to mental health during the pandemic.

The built digital model (Buddies Space) was published in 2021 as a mobile app for a developmental network that provides peer-mentorship and emotional support groups

Objectives
The Buddy system has shown benefit during stressful times like COVID-19 pandemic, and it was recommended by CDC during this period. It is an effective method by which a deployed trainee shares the responsibility for his/her/their partner’s well-being.

The mission of this project is to decrease burnout among medical trainees during the challenging career transition period which occurs after matching into a residency program and onboarding during the resident physician’s intern year. By using this model, we wanted to leverage the accessibility, cost-effectiveness and reach of technology to connect physicians with peer mentors in our organization who would provide them guidance, emotional support, and resources throughout the physician's career.

Technology tools to be used: personalized developmental network mobile app (Buddies Space), video conference platforms (Microsoft teams).

Methods
Study project will provide weekly support groups from April 2023 to September 2023 including the following areas 1) Financial wellbeing, 2) Fertility and childcare needs, 3) Mental well-being during training. Resident physicians will be recruited from Brown University GME programs who have participated in the 2023 match progress. Senior resident physicians (mentors) will be provided an orientation four-hour course on principles of peer support and mentorship followed by monthly supervision with the psychology team to assess progress. Members will create a profile on the mobile app (Buddies Space) we built to accommodate mentorship best match. Junior residents (mentees) will choose which peer support group would like to join weekly for a six- month period on a hybrid model (virtual and in-person). We will use a hybrid model of in-person and online groups, linked with a digital platform to share the resources available.

Results/Outcomes/Improvements

The participants will experience peer support groups, which will allow participants to experience positive relationships in the learning environment and receive immediate support through interaction. Prior to the start of the mentor-mentee relationships, participants will be assessed on perceived levels of stress, stigma toward mental health, and burnout level, using the Perceived Stress Scale, Mental Health Seeking Attitude Scale, and Mini-Z Questionnaire, respectively. After finishing the peer support groups the same scales will be used to measure the outcome from the provided services. The anticipated outcomes are 1) reduced stigma toward mental health and 2) reduced burnout level and 3) reduced global life stress level. We also plan to get a subjective outcome through a focus group with participants at the end of the project.

Significance/Implications/Relevance

This mentorship model creates a community where ambassadors in mental wellbeing help train others to be peer mentors to their younger colleagues who will pay it forward when they are senior residents. Providing peer mentorship during this critical time period of the undergraduate medical education (UME) to GME transition will create a template for a way to reduce high levels of stress of learners that occurs during this time. Virtual peer mentorship and support groups can expand to be intersectional between different institutions. Additionally, mentorship that includes mental well-being as a focus will prevent suicide and decrease stigma related to mental health treatment and asking for help.

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Link to the tools will be used:

Buddies Space app:
https://apps.apple.com/us/app/buddies-space/id1569433390

Microsoft teams
https://apps.apple.com/us/app/microsoft-teams/id1113153706

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Poster #37: ACGME Clinician Educator Milestones – Faculty Self-Assessment and Competency Review

Author(s): Erin Walker, MA, MEd

Institution(s): Geisinger

Abstract Type: Innovation-focused

Background
In September of 2022 the ACGME finalized the Clinician Educator Milestones, an initiative designed to promote faculty self-reflection, development, and growth as clinician educators. While not an accreditation requirement, the Clinician Educator Milestones help guide the professional development of faculty using a similar competency-based model. Faculty are provided a self-assessment appraising 20 sub-competencies, which fall under five competencies: Universal Pillars for All Clinician Educators, Educational Theory and Practice, Diversity Equity and Inclusion, Well-Being, and Administration. Graduate medical education (GME) has utilized the Clinician Educator Milestones for faculty self-assessment of their experiences and knowledge as clinical educators.

Objectives
To utilize the Clinician Educator Milestones as a tool for faculty to self-assess their knowledge and experiences as educators.

To provide the Faculty Development department with awareness of areas where faculty have identified lower levels of competency with the intention of providing additional programming to improve self-assessment scores.

Methods
To provide faculty the opportunity to self-asses with the Clinician Educator Milestones and collect their responses, an online survey was developed in the same design as the ACGME Milestones, utilizing a five-level rating scale with specific descriptions for each level. One hundred thirty-two faculty, consisting of Program Directors (PDs) and Associate Program Directors (APDs) were sent the optional survey via email with a week-long window for completion. Survey responses were anonymous as to the individual who provided the self-assessment responses, but participants were asked to select the program(s) they support as faculty for completion tracking on the department level. The survey platform automatically returned a copy of the responses via email to the participant once completed, allowing them access to their self-assessment results.

Results/Outcomes/Improvements
The Clinician Educator Milestones survey was completed by 32 respondents, affiliated with 37 GME programs (5 selecting multiple programs of support), including residencies and fellowships across medical and surgical fields (both ACGME and non-ACGME accredited). Initial review of the results was to determine competencies where a high percentage of faculty assessed as having lower experience or knowledge, indicated by Level 1 or 2 selections. Educational Theory and Practice 9: Medical Education Scholarship had the lowest rated results, with 34.38% of respondents self-assessing at Level 1 (3.13%) and Level 2 (31.25%). Within the same competency, an additional 31.25% rated themselves as Level 3, with 25% at Level 4 and 9.31%

at Level 5. Another area of interest was diversity, equity, and inclusion (DEI), where 15.63% of respondents self-assessed as Level 1-2 and 34.38% as Level 3, indicating an area of opportunity for further faculty development.

Significance/Implications/Relevance

The survey results detail a high need for further faculty development in Medical Education Scholarship. 34.38% of faculty respondents self-assessed at Levels 4 and 5, indicating that they would be comfortable serving as the principal investigator for scholarship. Supplemental content on academic scholarship would ensure faculty competence and the confidence to lead research efforts for residents and fellows. DEI is an additional area of significance, due to the complex and serious implications to the well-being of the learner, and society as a whole. A high value has been placed on the efforts of faculty that serve as role models and advocates working to develop DEI initiatives and address inequity throughout the system. The Education Specialist shared the results with the Faculty Development department and suggested areas to increase faculty competence as clinician educators. Participants will be encouraged to self-assess on an annual basis and track their development over time.

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Accreditation Council for Graduate Medical Education (ACGME) The Clinician Educator Milestone Project:
Https://www.acgme.org/globalassets/pdfs/milestones/standalone/2022/clinicianeducatormilestones.pdf

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Poster #38: Development of an Enterprise-Wide Interprofessional Health Equity Curriculum Framework

Author(s): Brett Robbins, MD; Theresa Green, PhD; Diane Hartmann, MD

Institution(s): University of Rochester

Abstract Type: Innovation-focused

Background
There are unacceptable and widespread health care disparities based on race, sex, and socio-economic status across a majority of measured health outcomes in the United States (1). This pattern is consistent across measures related to health care coverage, access, and use; health status, outcomes, and behaviors; and social determinants of health.

In this context, the ACGME has appropriately made health equity and health care disparities an accreditation priority. The ACGME now requires health equity teaching and related resident experiences in the Common Program Requirements for all GME training programs. (2) This requirement is in line with national movements towards addressing equity in health systems including new Joint Commission requirements to improve health care equity in clinical care and emerging trends in screening for social determinants of health as part of standard practice.

Objectives
Like most well-intended academic institutions, our medical center did not have a systematic approach to health disparities or health equity education to prepare our GME trainees for their future practice in an evolving multicultural and multi-ethnic milieu. Our objective was to create a curriculum framework that followed three principles. First, establish high standards and consistency across the institution while maintaining discipline-specific flexibility in style, content, and format. Second, gear the curriculum towards residents/learners but ensure an inclusive and supportive environment encouraging learning throughout each department. Third, focus on ‘real-world’ examples with data and issues from the surrounding community of importance to each discipline.

Methods
We established an interprofessional task force to create a core curriculum framework focused on health equity for our health system’s GME trainees. Task force membership included institutional leaders in public and community health, GME (leaders and trainees), nursing leaders and educators, informatics directors, as well as experts in education and staff development, faculty practice leadership, operations and our chief quality and medical officers. We utilized the nationally available competencies and objectives found in CLER (3), AAMC (4,5), and Nursing (6) to create the KEE (Knowledge, Empathy and Equity) Curriculum Framework for GME with the intention of eventually expanding to other learners. We created a programmatic self-assessment to establish a baseline and created attainable goals for system improvement. We collected a resource compendium of health equity learning tools including a brief video discussing health equity from the voice of community leaders.

Results/Outcomes/Improvements
The KEE Curriculum crosses three learning objectives in social determinants, empathetic care and population health improvement with three typical resident phases of curriculum: obtaining knowledge, patient care and applied workplace learning in quality improvement. Residents are able to gather foundational concepts and apply them to ongoing clinical rotations as well as in

assessing patient data to create system change.

We recruited eight GME programs to pilot the curriculum. This engages 29% of our GME programs and 37% of our GME trainees. Each pilot group established a champion team including the GME training program director. Each completed a baseline needs assessment reflective of the curricular framework. Based on these results each program team prioritized goals and objectives to pursue with the assistance of the task force members.

Each of the pilot programs has made progress on addressing established goals in curriculum development and all trainees viewed the community

Significance/Implications/Relevance
Any profession or discipline within our health center and beyond can utilize our KEE Curriculum Framework. The KEE Curriculum Framework provides a starting point, and the compendium of organized health equity educational resources is organized by the framework to be transparent and user-friendly.

Over the first several months of work, each of the pilot GME programs made progress on planned curricular improvements after baseline measures. Through framework connections, residents are learning how to examine data collected in the EMR to study health disparities in their patient populations. This has led to resident-driven interprofessional quality improvement projects aimed at reducing health care disparities. Giving medical students, residents and fellows the knowledge and tools they need to recognize and address inequities in their patient's social circumstance and health care is critically important to the overall goal of addressing health disparities.

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Poster #39: Elder Abuse Curriculum for Medical Residents and Geriatric Fellows

Author(s): Lori Mars, JD, LLM; Carmen van den Heever, BS; Bonnie Olsen, PhD

Institution(s): Keck School of Medicine of USC

Abstract Type: Innovation-focused

Background
Elder abuse (EA) is a pervasive global public health problem affecting millions of older adults (OA). EA is seldom reported and detected, exposing victims to unremedied harms. Reportedly, one in six OA are affected with ethnically diverse, cognitively impaired, disabled, and/or underserved being most at risk. Abuse is most often committed by family/trusted others, resulting in low reporting rates. OA are reluctant to report family upon whom they depend for essential needs. Many OA fear retaliation, are reluctant to publicly expose private harms, and/or are unwilling to subject family to liability. Physicians are well positioned to identify and respond to EA yet are rarely trained in the signs and report less than two percent of EA cases nationally. This inhibits the timely and effective delivery of medical care and social support to victims. Currently, limited curricula exist to address this need and what is there is rarely applied unless residency faculty have an identified interest in EA.

Objectives
The project team, led by USC faculty, in collaboration with UCI, UCSD, and UCSF faculty, are all grantees of the Geriatric Workforce Enhancement Program (GWEP) and were further advised by EA experts and instructional designers. Through an iterative process, they developed a curriculum to educate family medicine, general internal medicine, psychiatry and emergency physician residents and geriatric fellows in the signs and risk factors of abuse, assessment, barriers to disclosure, and mandated reporting requirements. The product is intended to 1) be applied flexibly to meet a wide range of program needs, 2) provide engaging interactive material informed by learning theory to maximize transfer of learning to clinical application, and 3) reduce barriers to physician intervention in EA cases. The six-module curriculum is available at no cost on the USC Center for Elder Justice website.

Methods
The curriculum is being piloted by family, general internal, emergency, and psychiatry residency programs within the project team universities. Programs select one of three adaptable curriculum plans (complete, abbreviated, and brief overview) that best meets their respective program needs and is delivered through interactive online modules and faculty-facilitated skill-development sessions. Practice board questions are provided to promote applied practice. A retrospective pre-post evaluation survey was developed to assess learner perception of the effectiveness of the training to inform knowledge, attitudes, and skills regarding EA signs, risk factors, detection, intervention, and reporting protocols and is embedded in the curriculum for ease of use. Survey content aligns with ACGME core competencies for the relevant residency programs and IRB approval was obtained from each of the institutions. Survey results will be analyzed to address the stated goals.

Results/Outcomes/Improvements
It is anticipated that more than 70 learners will complete the curriculum by the end of January 2023. Of those, it is expected that over 50 learners will complete the survey. Data analysis will be completed in the following month to assess program characteristics, learner characteristics, and learners' perception of level of knowledge of EA, understanding of EA reporting

requirements, barriers to reporting, and confidence in detecting, reporting, and intervening in cases of EA. Analyses will also focus on understanding the amount of time each program allocates to elder abuse, as a proxy priority measure. Survey results will be analyzed and documented to assess learner perception of efficacy of the curriculum. The findings will be presented in professional meetings and peer-reviewed manuscripts.

Significance/Implications/Relevance

This EA curriculum fills a gap in medical residency and geriatric fellowship training, fortifying learners' awareness and skill in managing EA. Learners are primed to integrate EA into their differential diagnoses, facilitating detection of EA that would otherwise remain undiscovered in clinical settings. By identifying barriers to OA disclosure and physician detection, the curriculum promotes abuse prevention and harm reduction for vulnerable OA experiencing mistreatment. Pragmatic skills in mandatory reporting fosters improved relationships between medical and social service providers. Applying a person-centered, trauma-informed lens, learners are equipped with the tools to improve response to EA in ethnically and culturally diverse, cognitively compromised, disabled, and institutionalized OA. The curriculum will stimulate the development of complementary training for providers in interprofessional fields to identify and intervene in cases of EA, advancing a strategic response.

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Poster #40: Compassion as Therapy: A Longitudinal Compassion Course Helps Residents Find Meaning in Medicine, Improves Well-being and Patient Interaction

Author(s): Jon Courand, MD; Holly Day, MD

Institution(s): University of Texas Health San Antonio

Abstract Type: Innovation-focused

Background
The emergence from the COVID-19 pandemic has resulted in a second pandemic in mental health.[1,2] Isolation and post-traumatic stress for physicians still persist in our health care systems, as do high rates of burnout.[3-6] In this environment, residents may become disillusioned, and question their reasons for entering medicine. We surmised that a Compassion Course would positively impact residents, with practices learned extending to their peers and patients. Compassion is associated with reduced levels of burnout and greater well-being,[7,8] as well as improved patient outcomes, adherence, and lower risk of malpractice.[9] We anticipated our virtual course would also help establish connection and a support network. Clearly stated: The compassion course challenges participants to manifest their inner compassion more fully by using cognitive and emotional practices, which they will then utilize to improve their communication and relationships within healthcare, and society.

Objectives
Our objectives were for residents to first develop techniques for quieting and focusing the mind, building an understanding of harmful and beneficial mental states as a pathway to cultivate self-compassion. Second, to leverage the techniques they developed for self-compassion in order to limit bias, enhance forgiveness, and show gratitude for others, ultimately fostering their ability to practice cognitive and affective empathy. Additional training will allow them to identify and avoid empathic distress. Finally, through practical engagement, we hope to develop their confidence and motivation to realize their empathy as compassionate action for their families, peers, patients, and society as a whole.

Methods
One author, (JC) attended the Compassion Integrity Training Course created by Life University in Marietta, GA. With permission, the curriculum was adapted to our healthcare environment and IRB approval was obtained. This course is a self-directed longitudinal 10-month program, with 10 unique modules and three domains: self, other, society. A Pre- and Post-Course Survey was be sent to each participant. The pre-course survey asks reasons for participating and provides three self-assessment tools regarding their current level of self-compassion[10], their compassion for others[11], and engagement in society.[12] All self-assessments were validated instruments, and either free access or used with permission. The post-course survey includes the same self-assessment tools and a holistic course reflection. For anonymity, participants were asked to create a unique identifier to use for both the pre and post surveys so they could be matched together. Two cohorts have completed the course.

Results/Outcomes/Improvements
Fourteen residents completed the course in 2021, and 15 in 2022. Pre-course survey analyses showed both groups were initially similar. They had moderate average scores in the domain of self-compassion, as indicated by the Neff Self-Compassion Test (2.9 out of five in 2021, and 2.6 out of five in 2022, respectively). They had high average scores in compassion for others (Santa Clara Brief Compassion Scale, 27.2/35 and 29.8/35), and in compassionate action towards

society (Schwartz Center Compassionate Care Scale, 34.8/50 and 36.8/50). They shared common themes in their reasons for taking the course, seeking self-improvement and a constructive method to combat burnout. The 2021 post-course survey analysis revealed that average scores in self-compassion increased by 13% (2.9/5 to 3.3/5), compassion for others decreased by 2.9% (27.2/35 to 26.4/35), and societal compassion increased by 11.3% (35.8/50 to 38.7/50). Post-course respondents uniformly reported benefit from their experience.

Significance/Implications/Relevance

This pilot study began during the height of the COVID-19 pandemic to provide residents an opportunity to connect, enhance their intrinsic empathy and compassion, and boost their compassion for the high volume of desperately ill patients, many refusing medical advice. The initial goal was to strengthen compassion for others. Our pre-course analyses in both cohorts showed average scores in self-compassion, but higher than average scores in compassion for others and society, as one might expect. The surprise post-course finding was the increase in scores for self-compassion, without improving compassion for others. We viewed this not as a failure, but as an indication that the course had ameliorated the effects of isolation, burnout, and compassion fatigue on the participants, through group interactions to nurture beneficial mental states and gratitude for their dedication to patients. One cannot pour from an empty cup: developing self-compassion builds the needed foundation to help others.

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Poster #41: Ten-Year Outcomes of Systems-Based Practice Rotation with Quality Improvement and Patient Safety in Internal Medicine Residency Program

Author(s): John Pamula, MD, MHA, FACP, CPHQ; Dr Sheela Prabhu, MD; Dr Victor Kolade, MD FACP CPHQ

Institution(s): The Guthrie Clinic

Abstract Type: Innovation-focused

Background
Systems-based practice (SBP) is one of the core competencies of the Accreditation Council for Graduate Medical Education (ACGME) and also American Board of Medical Specialties (ABMS). Teaching the concepts of SBP and measuring the outcomes can be challenging.

Resident participation in Quality Improvement (QI) is required by ACGME and assessed at Clinical Learning Environment (CLER) Program site visits. The CLER Program advocates for learners to be an integral part of the Sponsoring Institute's safety culture, and expect them to be able to identify errors and near-misses and be able to perform a root-cause analysis and come up with action plan. (RCA2) Our IM Residency program has 36 residents. We created a one-month rotation for SBP/QI which provided protected time.

Objectives
a) Evaluate Residents' satisfaction with a structured SBP rotation with QI and PS components in an IM training program utilizing experiential learning model and active learning exercises.
Measurement is rotation evaluation by residents
b) Measure the outcomes of learning by the trainees by number of voluntary teaching to their peers and the outcomes of QI project efforts by number of completion of one PDSA cycle.
c) Increasing resident engagement in patient safety by incorporating teaching on EBM (evidence-based medicine) and Medico-legal liability by involving patient safety department and legal department. Use the data of ACGME survey to determine the percent of residents who know how to report patient safety events and percent participating in safety event investigation and analysis.

Methods
The SBP part has various interactive sessions with members of healthcare network on topics of 'what is systems and SBP,' understanding micro-macrosystems and how they interact, transitions of care, leadership skills, conflict resolution, infection control, clinical outcomes, clinical regulation compliance, clinical documentation, in-patient coding, clinical billing, revenue cycle, practice administration, PCMH (patient-centered medical home), population health, social determinants of health (SDOH), high-value care, choosing wisely, modalities of systems quality development, health care finance/payment models, cultural competency, value-based purchasing reimbursement, reducing unnecessary testing, etc.

After attending the sessions they complete a self-assessment questionnaire.

Residents complete QI projects and present in annual research day. All residents are taught to recognize and to report adverse events, present cases in front of their peers, faculty and patient safety department

Results/Outcomes/Improvements
Self-assessment of all the residents who went through the rotation form 2013 to 2022, showed 100% engagement. Their anonymized rotation feedback reflected their high interest in learning the administrative and business side of medicine.

100% of residents voluntarily presented one SBP topic to their peers which was well received with anonymized feedback from the rest of the class.

QI - The number of QI projects with completion of at least one Plan-Do-Study-Act (PDSA) cycle from 2013-to 2022 are 73 out of 77 projects (94%) 94% presented their completed projects with some accepted at national conferences and published.

PS - 100% of the residents presented cases to demonstrate their skill set of RCA2.

ACGME survey results for patient safety/teamwork showed steady improvement: 2017 – 96.2%, 2018 - 98%, 2019 – 99.3%. The 2021-2022 ACGME survey showed 100% in 'know how to report patient safety events' and 94% in RCA2 participation.

Significance/Implications/Relevance
We created SBP rotation which gives a unique experiential learning to the residents. SBP is a powerful way to foster the trainees' systems thinking which will impact the patient care at hand and throughout the learners' careers which will pay rich dividends. With COVID-19, prevailing health care disparities and high costs, SBP does make significant differences to create effective health care delivery adding high value to the institutions, improve patient care quality and reduce errors. Collaboration among GME, the Patient Safety Office, and the Legal department can be very fruitful in inspiring resident experience in patient safety. A dedicated faculty leader/CLER leader can liaison between the departments to structure the input according to the needs of the particular residency program. Consistent implementation of safety practices will foster a culture of patient safety. This not only promulgates high-quality patient care but transforms the residents into safety-conscious clinicians.

Poster #42: Design and Implementation of a Comprehensive Multidisciplinary Institutional Global Health Track Curriculum for Graduate Medical Education Trainees

Author(s): Saiza Jivani, MPH; Jay Shah, MD; Brittany Murray, MD, MPhil, FAAP, FACEP; Anna Yaffee, MD, MPH

Institution(s): Emory University School of Medicine and Children's Healthcare of Atlanta; Emory University School of Medicine

Abstract Type: Innovation-focused

Background
Opportunities to learn and practice in the realm of global health are a driver for graduate medical education (GME) trainees to select training programs. Unlike clinical specialty education, there are no standardized national curricula or requirements mandated to ensure topical competency in global health. Fragmented institutional missions and disjointed, short-term departmental projects can underutilize resources and disenfranchise partner sites abroad, reinforcing colonialist global health experiences and education.

Objectives
To provide a standardized, comprehensive global health curriculum to graduate medical education (GME) trainees enrolled in a multi-disciplinary global health track at a large academic institution in the United States.

Methods
A comprehensive, multidisciplinary 24-month curriculum was designed encompassing key global health competencies identified through literature review and stakeholder meetings. To accommodate the complex scheduling of graduate medical education (GME) trainees, an asynchronous virtual curriculum with quarterly in-person seminars was created. Year one of the curriculum includes four modules on fundamental global health topics, and year two involves a specific global health project or experience. Subject matter experts from our institution as well as global health organizations and international colleagues participated in each seminar. The first year of the track has been completed. The four modules were evaluated using a questionnaire on course content and feedback, as well as pre-and post-knowledge examination.

Results/Outcomes/Improvements
Over the first year, 24 participants from seven specialties were enrolled. The overall survey response rate was 63%. Based on the post-module evaluations, 67% of the respondents reported learning a great deal from the modules, and 80% indicated the modules challenged/stimulated thinking. Trainees noted that they appreciated the opportunity to meet people from different training programs and backgrounds. Fundamental knowledge improved by 31% over the four modules.

Significance/Implications/Relevance
A unified Global Health (GH) curriculum improves participant GH knowledge base and inspires multidisciplinary collaboration. By enhancing individual residency level programming with institutional curriculum, we hope that trainees and partner institutions benefit from more knowledgeable, organized, and bilateral collaboration. Assessment of the second year of the curriculum, as well as assessment of future classes will be important in informing tailoring of the curriculum to learner needs. Additional inclusion of residents from partner institutions in future curricula iterations would make this a more comprehensive and far-reaching initiative.

The design and implementation of a standardized GH curriculum can be expanded on a larger scale for GH educators across institutional and country borders. This can improve access to GH education on a larger scale, with the opportunity for Graduate Medical Education (GME) institutions to impact these GH educational initiatives.

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Poster #43: Multidisciplinary Effort to Improve Inpatient Management and Transition of Care for Patients with Low Health Literacy and Limited English Proficiency

Author(s): Ekaterina Vypritskaya, MD, PhD; Parisa Takalloo, MD; Seyedehferyal Mousavi, MD

Institution(s): Capital Health Regional Medical Center

Abstract Type: Innovation-focused

Background
Diabetic Ketoacidosis and Hyperosmolar Hyperglycemic Syndrome (DKA/HHS) are two complications of uncontrolled diabetes. Patients readmitted with diabetic ketoacidosis account for more than 130,000 readmissions per year with an annualized cost of $2.4 billion for the intensive care required. Management of diabetes includes very well-known traditional pharmaceutical interventions, but many other factors influence unfavorable outcomes. They include socioeconomic factors, psychosocial factors, low health literacy (LHL) and limited English proficiency (LEP). These factors contribute to the readmission rate for patients who receive proper medical treatment but fall through the gaps during transition to outpatient setting.

Objectives
To enhance patient's awareness of basic diabetes information and care related issues, including medications, testing material and educational resources. To enhance provider's knowledge and skills in management of DKA and HHS and transition of care in most vulnerable population of patients with low health literacy and limited English proficiency.

Methods
Forty-two Spanish speaking patients, self-pay (no insurance), with a diagnosis of DKA and HHS admitted between December 15, 2021 and May 1, 2022 were identified. Pre- and post- surveys in Spanish for patients on management of diabetes were conducted. Providers were also surveyed pre and post intervention. In collaboration with Endocrinology, Pharmacy, and Case Managements Departments, interactive educational sessions for medical residents and medical students were carefully designed. Workshop style sessions on medical knowledge (clinical scenarios of DKA and HHS), communication skills (how to conduct education for patients with LEP and LHL), system base practice (insulin and other medications regiments, check list on discharge for self-paid patients) were led by senior residents. We offered to every patient who did not have a primary care physician (PCP) to follow up with us at the Family Hearth Center, our resident-run clinic. We established PCP for 28 hospitalized patients.

Results/Outcomes/Improvements
Forty-two patients were included in the study period and pre-and post-education data were compared. The mean age of patients was forty-seven; 43% were female and 57% were male. All patients were Hispanic, Spanish-speaking only. Analysis was performed using one tailed two sample paired t-test. Results revealed significant improvement in patient's diabetes literacy (p value 0.032). Analyzing pre and post surveys for 36 residents by using the same method also showed significant improvement in their confidence in order to manage diabetic patients in the hospital settings. (p value 0.027). We helped to establish a PCP for 28 patients during discharge process.

Significance/Implications/Relevance
Diabetes Mellitus is a complicated and expensive disease which causes life threatening complications and poor health outcomes. Lack of diabetes literacy, language barrier, and poor

social economic status makes patients even more vulnerable and puts then at high risk for readmission for such significant complications of diabetes as DKA and HSS.

Recognition and extra support for this vulnerable population of patients must be provided by a multi-disciplinary team in the hospital and during transition time.

Only with special education and developing a specific set of skills physicians will be able to improve equity of care of patients with diabetes and reduce readmission for DKA/HHS. As a result of our study and, as per, feedback, we designed our own educational sessions and incorporated these into the annual curriculum for medical residents. We connected 66% of our patients to our free clinic and helped them to establish their Primary Care Physicians for follow up.

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Poster #44: Point of Care MRI Is a Value-Added Imaging Technology for a Neurology Residency Training Program

Author(s): Christopher Medina, MD; Edmond Knopp, MD; Aimin Wen, MA; Christopher Willie, MBA; Paul Wright, MD

Institution(s): Hyperfine; Nuvance Health

Abstract Type: Innovation-focused

Background
A portable MRI is a novel technology that enables the user to safely and effortlessly mobilize MRI imaging equipment to the to the bedside of a patient in a hospital setting. Going forward, we will utilize the term 'Point of Care MRI.' As a fully portable system, the MRI can be wheeled into a patient's room, when compared to a traditional MRI, that requires patient transportation to an MRI suite.

Objectives
Our objective was to implement Point of Care MRI as a dedicated neurology resident run program within a medical center and to become the first medical center in the United States accomplish this.

Methods
An intensive radiology training program for the neurology residents was developed. This training program involved a two-week session with the department of radiology and trained representatives from the portable MRI company. Skills sessions included transportation, storage, patient placement and coordination with nursing. The residents also underwent training with the radiology department for MRI safety, screening forms, radiology technician protocols and how to integrate the Point of Care MRI into our medical center’s picture archiving and communication system (PACS).

Results/Outcomes/Improvements
Training resulted in 100% proficiency of Point of Care MRI operating skills among our resident physician cohorts. This allowed neurology residents to operate the Point of Care MRI and establish a dedicated point of care MRI program.

Significance/Implications/Relevance
The significance of a neurology resident run Point of Care MRI includes, decreasing the length of stay, improving patient satisfaction and the ability to perform an MRI of the brain on unstable patients who can’t be transported ultimately resulting in improved patient outcomes. Empowerment of the neurology residents with this novel technology is an added benefit.

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Poster #45: House Staff Reporting of Patient Safety Events

Author(s): Neeraja Peterson, MD, MS; Jennifer Green, MD, MPH; Blake Funke, MD; Cecelia Theobald, MD, MPH

Institution(s): Vanderbilt University Medical Center

Abstract Type: Innovation-focused

Background
Residents and fellows are front-line health care workers who care for high volumes of patients and are frequent index observers of patient safety events (PSE). Despite being uniquely positioned as sentinel reporters, prior work has shown that residents infrequently do so.(1) Resident competency in "…participating in identifying system errors and implementing potential systems solutions" is a required component of most ACGME specialties and is essential for promoting a culture of safety.(2) A commonly cited reason why house staff do not report PSEs is lack of feedback on incident follow-up.(3-4) ACGME data suggests that residents and fellows lack awareness of how reporting can lead to more widespread change.(1) To address this, we conducted a study to provide house staff with real-time feedback on reporting of medical errors to increase engagement in quality systems. We hypothesized that improving feedback on PSE reporting would increase house staff reporting and satisfaction.

Objectives
To improve house staff reporting of patient safety events within a single institution's Department of Internal Medicine with feedback mechanisms for acknowledgement of reports.

Methods
The VERITAS System is a secure and confidential database used for electronic reporting of safety events and/or near misses involving patients, employees, and visitors. From December 1, 2018, to July 1, 2021, Department of Medicine (DOM) faculty at a large academic medical center identified all new safety reports submitted by internal medicine residents and clinical fellows. The departmental Quality and Patient Safety Director (QPSD) was alerted via automated email of all new reports from house staff and contacted the submitting individual within three days by email. The email contained (1) brief details of the report; (2) an explicit thanks for the submission, including notifying the house staff member's program director to highlight appreciation; (3) an outline of expected next steps; and (4) reinforcement of the importance of a subsequent event review. One of two authors reviewed each de-identified report and chose the thematic category that most closely matched the content.

Results/Outcomes/Improvements
There were 222 non-anonymous reports from 129 individually identifiable reporters. 47 of 129 reporters (36%) filed more than one report over the study period. The largest number of submissions for a single house staff reporter was 12. The average number of submissions per reporter was 1.7 with a median of 1. There were 19 categories of report content identified. Of the 240 total reports submitted, 43 (17.9%) were about nursing, 38 (15.8%) were about communication, 30 (12.5%) were about occupational injury, and 23 (9.6%) were about admissions. There was an overall trend of reports increasing over the time course of the study. At the end of the study period, qualitative feedback from house staff reporters was collected via an email from the QPSD. Seven of 15 house staff responded, and feedback was uniformly positive. House staff were appreciative of a personal email, and several indicated that this intervention made them more likely to report in the future.

Significance/Implications/Relevance
Our study showed that a brief, personal follow-up email to house staff who submit reports on medical errors can improve trainee engagement with and trust in quality systems at a large academic medical center.

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Poster #46: Empowering House Staff Champions to Address Barriers to Reporting

Author(s): Blaine Kenaa, MD; Mangla Gulati, MD, FACP, SFHM; Alissa S Werzen, MD; Nikhil Prasad, MD; Rachel Reynolds, MBA, MS, PMP, PMI-ACP; Mary J Njoku, MD

Institution(s): University of Maryland Medical Center; Jefferson New Jersey Infectious Diseases; University of Maryland, School of Medicine

Abstract Type: Innovation-focused

Background
Improving resident and fellow engagement in event reporting has been an evolving process. Strengthening connections between trainees and their academic institution during their short tenure of clinical training is one of the ways which this process can be optimized. Consistently providing feedback, focused on improvement initiatives from previous reported events can help promote transparency and create an opportunity for ongoing engagement. The chief resident for quality and safety (CRQS) has been implemented in the past to encourage resident participation in patient safety and quality improvement. However, most CRQS positions have been embedded within the individual department and focused on residents. In 2019, the University of Maryland was selected to join a national learning collaborative to actively engage learners in patient safety. As part of the multidisciplinary committee, trainees were engaged as house staff champions to provide a peer voice and bidirectional communications.

Objectives
Three house staff champions, from different departments and various stages of their clinical training were tasked with forming the “storytelling” subgroup to shape the clinical learning environment through individual narrative. The goal was to identify and highlight event reports submitted by trainees, share patient safety initiatives, developing a framework for inter-professional collaboration and basic comprehension regarding safety events and outcomes. These champions were leaders with interest and passion in patient safety and QI.

Methods
The champions met with trainees to identify barriers in event reporting. Event reports submitted by trainees were reviewed to categorize themes which served as the framework for developing PSQI stories and principles for education. Next step was fostering a multidisciplinary space to promote discussions regarding patient safety issues. The champions collaborated with chief residents from various departments to secure 15-minute storytelling sessions. Ten departments with highest trainee volume were selected to provide examples that were situationally relevant. These sessions were an opportunity to stimulate conversation on how to learn from previous errors. Recognizing reportable events, minimizing work arounds, and effectively submitting event reports were also addressed. Final step was optimizing the participation of trainees in adverse event analysis. To combat the perception of blame, a structured debriefing session was held for trainees that would participate in the analysis.

Results/Outcomes/Improvements
Perceived futility of action, lack of response to event reports and stigma around reporting “as a petty way to settle vendetta” were recognized as barriers to reporting. Forty-seven event reports submitted by trainees were reviewed. Thirty percent (n=14) highlighted miscommunication with nursing and allied health, 26% (n=12) reported delay in patient care and 11% (n=5) were addressing lack of support from consulting services. We were able to reach five of the 10 departments for “story telling” sessions. Trainees discussed that practicing in a hierarchical

environment makes it hard to seek change without support from leadership. Since July 2020, 243 trainees have participated in an adverse event analysis. Seventy have completed a post debriefing survey indicating that they are more comfortable reporting safety events including those they were personally involved in. Overall, there remains a sustained increase towards event reporting from residents, fellows, and faculty.

Significance/Implications/Relevance

Engaging trainees in event reporting requires a multi-pronged approach. Though storytelling is a powerful tool, it is imperative to use a variety of narratives given the breadth of context and interests. Successful trainee participation in adverse event analysis should also prioritize protecting those individuals who are involved from the perception of being judged as incompetent. Furthermore, any initiative to involve trainees in process improvement will need support from peers, department leaders, program directors and quality and safety leaders.

Poster #47: Orthopaedic Surgery Resident Case Log Code Selection, Attitudes, and Practices: A Survey of Residents and Program Directors

Author(s): Matthew Dulas, BA; Thomas Utset-Ward, MD, MBA.; Jason Strelzow, MD; Tessa Balach, MD

Institution(s): Ohio State University; University of Chicago

Abstract Type: Research-focused

Background
ACGME Resident Case Logs are one of the primary tools used by orthopaedic residency programs to follow and measure residents' surgical and procedural experience. Residents are expected to record cases in which they participate by entering corresponding Current Procedural Terminology (CPT) codes. Due to the self-reported nature of case logging, there is a large degree of uncertainty in the consistency and accuracy of case logging by orthopaedic surgery residents. Given the possibility of a large discrepancy in logging behavior, there is a potential for large 'logging related' divergence in similar cases logged and tracked between orthopaedic residency programs despite similar exposures and experiences. Current case log practices are poorly described in the literature.

Objectives
The aims of this study are two-fold: 1) to assess resident ACGME Case Log CPT code selection and practices across orthopaedic surgery residency programs; and 2) to understand current attitudes of both program directors and residents surrounding case logging.

Methods
Residents and program directors from eighteen ACGME accredited residency programs received standardized, consensus-built surveys distributed through the Collaborative Orthopaedic Educational Research Group (COERG). Residents and program directors each received separate anonymous surveys by email. Surveys were designed to assess resident Case Log training, Case Log practices, and attitudes toward case logging.

Resident surveys additionally contained subspecialty-focused clinical orthopaedic scenarios in sports, trauma, and spine. Each subspecialty clinical vignette contained four clinical scenarios with stepwise increases in complexity and possible CPT coding. Resident respondents were tasked with selecting the CPT code(s) and number of cases they would log. Respondents were asked to answer based on their current coding practices.

Results/Outcomes/Improvements
One hundred sixteen residents (response rate: 28.4%) and 16 program directors (response rate: 88.9%) participated. Case Log training was reported by 53.0% of resident respondents and 56.3% of program directors. Seven-point-eight percent of residents rated themselves "excellent" at applying CPT codes, while 0.0% program directors rated their residents' "excellent." Forty-point-nine percent of residents and 81.3% of program directors responded it was "extremely" or "very" important to code accurately. There was a significant difference in perceived importance of accurate coding between residents and program directors.

Resident CPT code selection agreement for each scenario was evaluated using Fleiss' kappa. For sports, the kappa values for the progressively more complex scenarios were 0.819, 0.731,

0.528, and 0.186. For trauma: 0.68, 0.83, 0.71, and 0.06. Finally, for spine: 0.41, 0.34, 0.10, and 0.21. All kappa values were statistically significant. ANOVA found no significant difference in average kappa value between subspecialties.

Significance/Implications/Relevance
As clinical scenario complexity increased, there were decreasing kappa values from the first clinical scenario (least complex) to the last clinical scenario (most complex) suggesting that in complex clinical scenarios there is less agreement in CPT code selection.

No program directors rated their residents' case logging abilities highly and few residents rated their own abilities highly. Only half of residents reported formal Case Log training; there was a significant discrepancy in the perceived importance of case logging between program directors and residents.

These findings signal the need for additional orthopaedic surgery resident Case Log training and an enhanced standardization in practices at the ACGME or residency level. This standardization is important given the role that Case Logs play in program accreditation, program reviews, and resident evaluations. There should especially be a focus on resident case logging practices and CPT code selection in more complex cases.

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Poster #48: Do You See What I See? Exploring Trends in Organizational Culture Perceptions across Surgery Residency Programs

Author(s): Aimee Gardner, PhD; Paula Costa, PhD

Institution(s): Baylor College of Medicine; ICF, SurgWise

Abstract Type: Research-focused

Background
Residency program culture has been linked to resident satisfaction, perceptions of organizational support, burnout, and attrition. As such, measuring trends in program culture can help inform organizational strategies, identify opportunities for improvement, and can help elucidate the efficacy of focused interventions. Sharing attributes of program culture with prospective applicants can also help facilitate enhanced alignment between trainees and programs. However, it's unclear the extent to which programs within the same specialty differ in various cultural components, and if individuals within the same program agree on perceptions of program culture.

Objectives
The goal of this study was to perform a multi-institutional exploration of differences in perceptions of program culture between surgery residency programs, and to identify if differences exist between residents and faculty within those programs.

Methods
General surgery residency programs had faculty and senior residents who met prescribed eligibility criteria to be a Subject Matter Expert (SME) complete a 29-item program culture inventory previously described in the literature. The inventory is divided into four distinct dimensions: Authoritarian (highly centralized program with power and decisions maintained by those in formal leadership roles), Self-Directed (program in which work ethic and internal initiative in taking charge of one's learning and circumstances is highly valued), Empowering (program in which trainees are encouraged and rewarded for identifying opportunities for leading and taking initiative), and Relational (program in which the ability to build and maintain relationships with peers and others is highly valued). Differences between and within programs were assessed via independent samples t-tests and analysis of variance (ANOVA).

Results/Outcomes/Improvements
One hundred twenty-four SMEs (95 faculty; 29 senior residents) across seven general surgery residency programs completed the program culture inventory. Programs provided an average of 18 SMEs (range eight to 38). Average ratings were 2.81 for the Authoritarian dimension (SD:0.64, ranging 2.34-2.98 across programs); 3.85 for the Self-Directed dimension (SD:0.42, ranging 3.73-3.93 across programs); 2.53 for the Empowering dimension (SD:0.54; 2.37-2.87 across programs); and 4.03 for the Relational dimension (SD:0.59, ranging 3.97-4.26 across programs). The extent to which each program was perceived to be Authoritarian significantly differed across programs ($p<0.05$; CI:0.03–1.26). Perceptions of Self-Directed, Empowering, and Relational culture were similar across programs. Faculty and trainees had similar perceptions of their program's culture with the exception of the Authoritarian dimension, wherein faculty rated their programs less Authoritarian than residents (2.71 versus 3.14, $p<0.05$; CI:-1.14–-0.25).

Significance/Implications/Relevance
These data suggest that faculty and trainees generally agree on various dimensions of organizational culture within their program, but differ in the extent to which they believe the program has Authoritarian attributes, with residents more likely to perceive that power and decisions are centralized at the top of the hierarchy. Thus, opportunities exist to create more cohesive perceptions of organizational culture within programs. Further, the Authoritarian dimension was the one cultural dimension that significantly differed across programs, suggesting that programs even within the same specialty differ in how decisions are made and communicated.

Poster #49: Remote Cognitive Therapy as a Novel Treatment for Cognitive Disorders

Author(s): Micah Sy, MD; Jordana Sandy, DO; Paul Wright, MD

Institution(s): Nuvance Health

Abstract Type: Innovation-focused

Background
Mild cognitive impairment and dementia have long been popular subjects of research, especially with the aging population. There is an increasing public concern regarding the quality of life and morbidity of affected individuals. Increased focus has been placed on early interventions that not only slow but possibly halt the progression of mild cognitive impairment into dementia. Technology has been integral in the development of therapies in a multitude of neurological disorders. A focus has turned to the use of common virtual exercises such as games and puzzles. In the recent wake of the COVID-19 pandemic, the importance of technology in health care has become undeniable. Institutions have been forced to conduct their practices remotely, through virtual meetings and communications. This advent of remote medicine has opened a door into utilizing technology as a new platform to treat and manage the cognitive health of the general population.

Objectives
In this project, we aim to highlight two points: 1) the utility of remote cognitive therapy in the long-term treatment of individuals diagnosed with Mild Cognitive Impairment (MCI), and 2) the relevance of this therapy in the continued education of practitioners.

Methods
Our institution has implemented the use of novel remote cognitive therapy in our outpatient practice as part of long-term management of patients identified with Mild Cognitive Impairment (MCI). The therapy employs the use of a digital device with daily prompts and cognitive exercises. Caregivers are also encouraged to participate via a partner application. Clinicians can track the patient's progress remotely, and the patients have the opportunity to communicate with their physician through the device if needed. We will measure the patients' progress over time both virtually and with interval clinic visits.

Results/Outcomes/Improvements
While the project is ongoing, preliminary feedback has shown that the use of remote cognitive therapy has been an integral component in the care plan of patients with MCI. Daily prompts and exercises as well as caregiver participation ensures compliance with the care plan. By establishing short-term, achievable goals that are displayed on the patient's device, long-term compliance is emphasized as patients visibly track their progress.

The integration of remote therapy to a daily practice has allowed our clinicians to expand therapy. The ease of virtual review of patient progress allows physicians to follow an increasing number of patients.

Significance/Implications/Relevance
As the tide shifts in health care to incorporate digital tools into clinical practice, expansion into remote cognitive therapy is an essential progression of patient care. Remote cognitive therapy allows for more consistent intervention that does not rely on office visits and pharmacy refills. For MCI, the emphasis is on early intervention to slow the progression into dementia. By

implementing remote cognitive therapy, patients can focus on daily goals while clinicians track their progress over time with less concern for missed visits or poor follow up. Expertise in remote therapy is a valuable addition to the physician's repertoire, and education on its use is likely to become a requisite in any training program. As we undoubtedly veer more towards virtual medicine, healthcare institutions would benefit adopting the use of remote cognitive therapy, especially in the setting of memory impairment.

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Poster #50: A Personalized Fellowship in the Era of Personalized Medicine

Author(s): Andrea Krussel, MA; Kathleen Bay, MA; Ronald Jackups, MD, PhD; Philip Payne, PhD

Institution(s): Washington University School of Medicine in St. Louis

Abstract Type: Innovation-focused

Background
In 2010, in response to the continuous evolution of complex data-driven healthcare systems in healthcare, physicians who were board certified in an ACGME specialty became eligible to participate in the subspecialty of Clinical Informatics (Desai et al., 2018). The American Medical Informatics Association (AMIA) defines the role of the informatician as one who “transforms health care by analyzing, designing, implementing, and evaluating information and communication systems that enhance individual and population health outcomes, improve patient care, and strengthen the clinician-patient relationship” (Safran et al., 2009, p.158). In 2018, The Clinical Informatics Fellowship (CIF) at Washington University School of Medicine (WUSM) was launched via the Department of Pediatrics to provide diverse trainees across specialties the opportunity to gain individualized training in Clinical Informatics.

Objectives
Our objectives for the fellowship are:
1. To prepare fellows for board certification who can, as described by Safran et al. (2009), “collaborate with other health care and information technology professionals to promote patient care that is safe, efficient, effective, timely, patient-centered, and equitable” and;
2. To provide trainees with the opportunity to advance their training via graduate training in biomedical informatics and tailored hands-on learning experiences that align with their interests, backgrounds, and specialties (p. 158).

Clinical hours are determined by supporting departments, and rotations are offered based on the trainee's background, interests, and goals. The result is personalized training that meets the trainee's needs while building informatics capabilities across departments.

Methods
Upon joining the program, fellows are assigned a faculty mentor, who partners with them to create an Individualized learning plan. The core faculty of the fellowship program identifies appropriate project-based learning assignments to fill gaps within the fellows' core competencies while building upon existing knowledge. The CIF has also successfully created ACGME-approved combined fellowships with pathology and pediatrics allowing trainees the unique opportunity to integrate informatics with additional subspecialty training in molecular genetic pathology and pediatric infectious diseases. Fellows are also invited to participate in bi-annual focus group sessions to evaluate the program, discuss rotations, and propose ideas for new rotations and collaborations to fill gaps in their training.

Results/Outcomes/Improvements
The field of clinical informatics is inherently interdisciplinary. We have had four fellows complete the program each of them have gone on to leverage their specialized skills to help solve informatics-related issues in their primary specialty in physician-scientist roles. While our fellowship does require a handful of foundational rotations, much of the fellows’ efforts are focused on their individual goals and interests. For example, one fellow who recently

completed our program particularly enjoyed teaching, and therefore one of his longitudinal projects was how to optimize our credit-bearing journal club course; he now continues that work post- fellowship in a faculty and director role at WUSM. One fellow opted to create an elective rotation with the company for which he wishes to work after completing the program.

Significance/Implications/Relevance

Our personalized fellowship is representative of a new training paradigm that allows fellows to integrate informatics to improve their clinical specialty by solving real-world problems physicians face as they try to “meet the demands of our rapidly evolving, data-rich health system” (Desai et al., 2018, p. 1711).

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Poster #51: Intergroup Dialogue as a Novel Method to Improve Complex Social Identity Development and Anti-Racism Understanding for Residents, Faculty, and Staff

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Institution(s): Wright State University

Abstract Type: Research-focused

Background
Recent acknowledgment of race-based disparities has highlighted the role racism plays in multiple facets of healthcare providers' and patients' lives. Medical education initiatives have been launched to train resident physicians to improve understanding of the role racism plays in the form of implicit bias training, healthcare disparities discussions, and bystander intervention training. There is little research available examining the effectiveness of these strategies, though to date, there is concern that the impact of these initiatives may be minimal, and in some cases problematic.[1,2] Intergroup dialogue is an educational pedagogy for social identity development that is well established in many non-medical disciplines and has been implemented in 400 cities worldwide. Dialogue goes beyond simply understanding theory by providing participants with the tools to analyze the role of identities and power dynamics in their daily interactions.[3-5]

Objectives
This study aims to evaluate participants' perceived comfort level with various anti-racism concepts before and after a voluntary 10-session (year-long) intergroup dialogue training program. The primary outcome is participants' self-reported comfort in discussing race and identifying the role that race and racism have in interactions with patients and colleagues. Secondary outcomes included: comfort receiving feedback about race, ability to identify as an antiracist advocate, commitment to further understanding of race, understanding how race affects daily interactions, ability to identify own racial privilege, and comfort level of discussing other forms of oppression. Open-ended questions were provided to qualitatively analyze which themes from the sessions were most impactful.

Methods
Deidentified pre- and post-curriculum surveys were distributed to all obstetrics and gynecology resident physicians regardless of the number of dialogue sessions attended and to all faculty and staff program participants. Survey contained two open-ended questions and nine measures that participants rated using a 10-point Likert scale. Curriculum was modeled from The Program on Intergroup Relations at the University of Michigan and incorporated various interactive activities addressing topics including oppression, privilege, and physician-patient power dynamics.

Faculty/staff experienced the same curriculum but at different times compared to resident physicians. Survey results were compiled, and average pre-/post-curriculum changes were identified. A Repeated Measures Analysis of Covariance was performed to compare pre- and post-curriculum responses using the number of sessions attended as the covariate. Qualitative data was analyzed from a conceptual frame point and organized into four key learning themes.

Results/Outcomes/Improvements
Mean attendance for residents was five (range 0-10) and nine (range 8-10) for faculty/staff.

Significant post-curriculum improvement was noted across all primary outcomes after controlling for number of sessions attended: increased comfort discussing race ($p<0.001$), and ability to identify the role of race in interactions with colleagues ($p<=0.001$) and patients ($p<=0.001$). Secondary outcomes with significant improvement: comfort receiving feedback on problematic behavior ($p<=0.001$), identifying as an anti-racist advocate ($p<=0.001$), and comfort discussing other forms of oppression ($p<=0.001$). Additional outcomes demonstrated improvement, although they were not significant. Qualitative data revealed Knowledge Application and Acknowledgment of Feelings were the most commonly mentioned themes (22% for each). Participants mentioned feeling uncomfortable 54% of the time, while feelings related to empowerment and moments of actualization were each only mentioned 18% of the time.

Significance/Implications/Relevance

Intergroup dialogue had a positive impact on increasing comfort in discussing complex racial topics among obstetrics and gynecology residents, medical school faculty and staff, as well as aiding in participant's ability to identify the role that race and racism has on interactions with patients and colleagues. The results suggest that dialogue sessions where participants can acknowledge feelings of discomfort and apply the tools they learned had the most perceived impact. These results are encouraging, particularly in their ability to impact learner groups at multiple developmental levels. While data suggests long term application and development as a result of intergroup dialogue participation in various communities, more research is needed to assess whether the intergroup dialogue method creates lasting change in understanding, perceptions, and actions related to anti-racism efforts in medical education communities.

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Poster #52: Creating Allies: Evaluation of a Diversity, Equity, Inclusion, and Bias Workshop for Graduate Medical Education Program Coordinators

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Institution(s): Northwestern University Feinberg School of Medicine; Northwestern University Feinberg School of Medicine, Department of Family and Community Medicine; Rush University, Department of Family and Preventive Medicine; University of Chicago Medicine, Office of Graduate Medical Education; Loyola Medicine, Graduate Medical Education; Northwestern University Feinberg School of Medicine, Department of Surgery

Abstract Type: Research-focused

Background
Program coordinators (PCs) play major roles in graduate medical education (GME), including advisor, manager, scheduler, data manager and leadership functions. (ACGME, Nawotnik 2006). PCs interact with residents on a personal and professional level throughout training. Because of their involvement in so many aspects of GME program administration, PCs must have the interest, ability, and skills to actively and effectively engage in their programs' diversity, equity, inclusion (DEI), and belongingness efforts. Little is known about PC learning needs, level of interest, and self-reported skills and attitudes regarding DEI initiatives in GME.

Objectives
This study sought to describe the characteristics, knowledge, and attitudes of program coordinators attending a professional development session about diversity, equity, inclusion, and bias in GME.

Methods
Participants: All participants registered for the workshop were invited to participate (N=198). A survey was sent a week prior to the session. Survey data was used to frame the workshop discussion and content.

Session: The session was a two-hour interactive, virtual, workshop entitled "Disrupting Bias in GME" and presented by a faculty with expertise in the DEI environment (KG) and sponsored by the Chicago Area Medical Education Group (CAMEG).

Tools: The survey included items about previous training in DEI and bias, privilege, social justice, allyship, and demographic questions.

Analysis: Descriptive statistics including item means, percentages, and frequencies were calculated for all quantitative survey items. Chi square analysis was used to assess the relationship between categorical variables.

Results/Outcomes/Improvements
The response rate was 53% (105/198); 42% identified as underrepresented minority; 90% identified as female. Institution type varied (54% academic centers). Fifty-eight percent received mandatory training on bias while 13% were previously trained on bias at a conference focused on the role of a PC. Fifty-one percent of academic employed PCs received institutional GME specific training compared to 29% of their community peers ($X^2=5.1$, $p=.02$). Eighty-nine

percent of PCs have contact with applicants during recruiting and 65% report participating in the rank process (20% have a voting role). Thirty-eight percent report screening applicants in ERAS. Sixty-eight percent offer informal evaluations. Twenty-seven percent never evaluate trainees. Twenty-six percent give verbal feedback to the CCC or PD, and 10% complete evaluation forms used by the program.

Eighty-seven percent agreed or strongly agreed that societal forces affect individual performance. Most agreed it is the PC's professional responsibility to confront colleagues who display signs of discrimination toward women (66%) or cultural/ethnic identity

Significance/Implications/Relevance
PCs reported a substantial and impactful role in recruiting. Fewer reported having a significant role in evaluation, although approximately one in four PCs give feedback to the Clinical Competency Committee. Given these roles, in addition to the other roles a PC is likely to play at a residency program, the need for PC engagement in DEI efforts, including self-assessment, antiracism and bias training, is clear. PCs can be strong allies for URM residents, and a lack of training or awareness could introduce bias into critical GME processes.

In this study, PCs attending an allyship and bias workshop generally agreed that societal forces, such as racism, could affect an individual's performance. However, fewer reported feeling personal responsibility or empowerment to confront discrimination. Future work may focus on strengthening the role of PCs in engaging URMs throughout the residency program and strengthening overall allyship with residents.

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Poster #53: An Interactive Multisource DE and I Dashboard at the Program and Sponsoring Institution Levels

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Institution(s): Advocate Aurora Health

Abstract Type: Innovation-focused

Background
Recent literature emphases that Diversity, Equity, and Inclusion (DE&I) efforts be data driven and transparent, often in dashboard format, to support the ability of GME programs and sponsoring institutions (SI) to clearly identify progress and concerns longitudinally. DE&I efforts have been a long-term focus in our GME programs and SI and are now further delineated in the ACGME's Common Program Requirements scheduled to take effect July 1, 2023. However, DE&I data sources may be limited, challenging to collect and/or in variable formats from multiple sources making it difficult to capture a longitudinal view of our efforts by program/SI.

Objectives
To address the need for a longitudinal GME/SI DE&I data dashboard, we identified existing data sources and developed new DE&I data sources then created a DE&I dashboard with cross-cutting elements and associated evidence across individual programs and the SIs.

Methods
To develop the dashboard, we reviewed our existing available data sources. We already had data available from two sources: the ACGME Annual Faculty and Residents surveys and data collected during the recruitment progression (apply, screen, invite, match). Our GMEC Program Accreditation subcommittee developed common internal DE&I items that we added to common GMEC required evaluations sent by all programs and added a standard item for the Annual Program Evaluation (APE). To examine competency, the subcommittee approved a DE&I structural fluency milestone that was added to the required faculty assessments of residents. The data from these various sources was then compiled into an excel dashboard and posted in MedHub to make the DE&I data set accessible and transparent to all programs and the SI. Excel was selected to allow all users to add additional dashboard elements unique to their programs and to create charts and graphs without any additional training.

Results/Outcomes/Improvements
A single item was added to each of the four evaluations completed by resident/ fellows: 1) Program Exit Survey; 2) Clinical Teaching Evaluation; 3) Evaluation of formal teaching sessions; and 4) End of Rotation Evaluation. Note: A common item was developed/modified as needed to fit each evaluation form ("Climate Promoted Equity, Diversity & Inclusion: All learners were included & treated with respect; diversity was explicitly valued, implicit biases were acknowledged, and mitigation strategies deliberated."). The dashboard currently includes nine DE&I elements abstracted annually: internal evaluations (4); Milestone rating (1); ACGME Faculty and Resident Survey (2); APE (1); and recruitment progression from application to match (1). Users are able to drill up (SI) or down to program level data by data element. Dashboard

stakeholders include programs and their program evaluation committees (PEC), GMEC and its various subcommittees and Academic Affairs and system leaders.

Significance/Implications/Relevance
Creating a DE&I dashboard with multiple elements from varied sources allows for easy data review. It's transparency and accessibility allow the PDs, DIO, and other staff to identify strengths and flag areas for further investigation /action which in turn improves engagement leading to an increase in response rate and increase in valuable data and feedback collected.

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Poster #54: Evaluating Residency Applicant Interest Through Web Analytics

Author(s): Adrian Olson, DO, MS; Ivan Bandovic, DO; Jacob Waldron, DO; Benjamin Best, DO

Institution(s): Ascension-Macomb Oakland Hospital; Ascension St. John

Abstract Type: Research-focused

Background
COVID-19 policies have limited medical students' ability to evaluate residency programs through restricting rotations and interview travel. As a result, residency programs have enhanced their online presence to meet the information demands of applicants, however trends in online information demands of applicants have not been described.

Objectives
The aim of our investigation was to gauge applicant perspective on social media for our residency program, to observe trends in applicant interaction with our online presence, and describe methods to improve program visibility and reputation.

Methods
Trends in applicant online interaction with our program were observed by utilizing objective data from our program's website and Instagram profile during the 2021-2022 application cycle. An additional anonymous survey post-interview period was utilized to gauge applicant perspective on our program's use of social media.

Results/Outcomes/Improvements
Website traffic spikes were recorded preceding important dates such as interviews, rank list deadlines, and match week. The most visited website subpages were: "Residents" with 15% of traffic, while the least was "Research" with 3.4% of traffic. Mobile devices constituted 37% of visits. Instagram followers were most commonly between the ages of 25-34, followed by 35-44, with 58% being male and 41% being female. The most active times of our Instagram followers were Monday-Friday between 12PM - 6PM followed by 9AM- 12PM and 6PM - 9PM. There were no differences between 9AM - 9PM on weekend days. Sixty percent of interviewees stated social media presence positively influenced program position on their rank list. Interviewees found a feature video the most informative and most helpful for determining the residency culture.

Significance/Implications/Relevance
By utilizing objective online metrics, residency programs can improve communication with applicants, time website updates, and better understand website traffic and sources. Understanding these dynamics and building a robust online presence may help programs strengthen their online visibility and recognition, maximizing their outreach to applicants.

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Poster #55: Using a Virtual Simulation Workshop to Increase the Competency of Interns in Effective Feedback Skills

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Institution(s): University of Riverside School of Medicine; California University of Science and Medicine; Arrowhead Regional Medical Center

Abstract Type: Innovation-focused

Background
ACGME competencies require that residents demonstrate interpersonal and communication skills that result in effective exchange of information and collaboration. Feedback is a constructive, objective appraisal of performance given with the intention to improve skills. An effective feedback format includes 1) confirming trainee's goals and needs, 2) obtain learners' self-assessment, 3) give specific feedback on performance 4) acknowledge and explore emotional reaction of learners; 5) ask for understanding, 6) problem solving and 7) establish follow-up. The one-minute preceptor includes: 1) obtain a commitment, 2) probe for supporting evidence; 30 teach general rules, 4) give positive feedback and 5) correct mistakes.
The COVID-19 pandemic has limited the use of in-person instruction and has required the medical community to increase the utilization of virtual conferencing for medical education. Teaching effective feedback skills through virtual media is a new skill in need of innovation.

Objectives
The objectives of this study were to 1) determine the feasibility of a virtual boot camp for interns using a virtual simulation workshop to teach giving effective feedback; 2) obtain baseline assessments of the interns on their competency in effective feedback skills; and 3) if the workshop can increase the interns' competency in using a formal feedback process and the one-minute preceptor five micro-skills.

Methods
We designed a virtual simulated workshop to meet the ACGME requirements to teach the ACGME competency of Interpersonal and Communication Skills. Standardized students' clinical scenarios and feedback scripts, rubric checklist based on effective feedback format and the one-minute preceptor five micro-skills, self-assessment tools, and PowerPoint presentations were created. Medical students were recruited and trained to play the role of virtual standardized students. In a 90-minute virtual workshop, incoming interns 1) gave feedback based on clinical scenarios presented by virtual standardized students and were graded by virtual students, 2) completed a self-assessment tool, 3) were taught by PowerPoint presentation on effective feedback principles, 4) gave feedback to the virtual standardized student using other provided scripts and were again graded by virtual students, and 5) completed the self-assessment tool. The data was collated, and statistical analysis was performed.

Results/Outcomes/Improvements
From June 2021-June 2022, 95 interns whose competency was graded as reaching proficiency or expert milestones significantly increased from pre to post training (47% versus 88%, p=0.007). Interns self-assessments also significantly increased with training [16.74 (SD=2.8) versus 18.02 (2.74), p=0.001]. Interns who reported previous training in feedback had significantly higher self-assessment scores [16.7 (2.95) versus 18.27 (2.45)]. Non-primary care

compared to primary care interns had significantly higher Milestone scores [3.22(0.91) versus 3.95 (0.79), p=0.003]. Overall, 80% of interns felt they learned a lot from the workshop; and 70% felt they would be comfortable using one-minute preceptor during residency. The step of the one-minute preceptor that the interns found easiest was “reinforce what was right” and what they found most difficult was “obtain commitment.” For formal feedback, easiest step was giving “positive feedback” and “explore emotional reaction” was most difficult.

Significance/Implications/Relevance

A virtual workshop can assess and improve the competency of interns in giving effective feedback by using a formal process and the one-minute preceptor. Medical school training on feedback is associated with increased competency at the beginning of internship. A virtual simulation workshop is feasible and requires less resources than in-person workshop. Medical students are enthusiastic, ready to help and easy to train as standardized students or patients for residents’ simulation workshops. Furthermore, this provides bonding and engagement between residents and medical students. GME and program directors should consider including virtual simulation training on feedback as part of the orientation curriculum for incoming interns.

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Poster #56: Effect of Media Format on Learning and Engagement: Insights for Educators and Content Creators Tackling Notoriously Challenging Topics

Author(s): Erin Gomez, MD; Emily Wu, MA; Christopher Devers, PhD; Erin Devers, PhD; Jeff Day, MD, MA

Institution(s): Johns Hopkins University School of Medicine; Johns Hopkins School of Education; Indiana Wesleyan University

Abstract Type: Research-focused

Background
MRI physics is a challenging subject for radiology residents and comprises a significant portion of the American Board of Radiology CORE exam [1], which must be passed in order to achieve board certification. Despite established needs for increased quality and quantity of physics resources, there is little information regarding the most effective method of engaging learners and delivering this content. To augment their physics training, medical trainees may utilize electronic and online media such as digital images and web-based learning modules [2]. A systematic review corroborated that radiology students viewed E-learning positively, and evidence suggests that it is at least as effective as traditional learning methods [3]. Electronic media may help fill the content gap for trainees, and while the principle that students learn better from words and visuals than words alone is well established [4-7], evidence regarding the most effective media format for studying is varied.

Objectives
Given the conceptual nature of radiologic physics, we chose to investigate whether animation could better illustrate lesson content, engage students and improve their learning, with the goal of informing content creators and educators about how to best share this material, as well as media regarding any complex or abstract subject matter with medical trainees as well as learners in a variety of educational settings.

The purpose of this study was to assess knowledge acquisition, efficiency of learning, engagement, and media preferences among respondents for educational media presented in one of three media formats: narrated animation, text with un-narrated animations, and text with still images.

Methods
Educational multimedia content was created based on results of a needs assessment. The topic of introductory MRI physics was chosen and a script was written which provided a brief overview of nuclear magnetic resonance. The script was translated into storyboards, which were reviewed, edited, and approved by faculty members in the Department of Radiology. A cartoon style was chosen for the visuals, using lively colors and anthropomorphized protons that served as “characters." Media was created using best practices from the Cognitive Theory of Multimedia Learning [4-7]. Media was created in three formats: fully animated and narrated video, text with short unnarrated animated clips, and text with still images. Participants completed an IRB-approved anonymous, randomized 30-minute survey-based experience that involved pre- and post-tests based on content from the script, interaction with the full version of one media type and excerpts of the other two, and post-media engagement surveys.

Results/Outcomes/Improvements
One hundred nineteen completed surveys were included in data analysis. Of the respondents,

99 self-identified as medical students and 20 identified as PGY-2 to PGY-5 residents.

Participants in all three groups significantly improved their scores from the pre-test (M = 3.21, SD = 1.29) to the post-test (M = 6.93, SD = 1.69), $p < .001$. There was not a significant difference in post-test scores across media formats. Participants randomized to the video format spent significantly more time training. There was a statistically significant improvement in the number of correct answers for seven of the 10 test questions.

The engagement survey consisted of six seven-point Likert scale questions. Participants randomized to the video group reported a statistically significant higher total engagement score than those in the text with animations and text with images groups. The video was also rated more highly in its usefulness as an introduction to the material and ability to hold the learner's attention.

Significance/Implications/Relevance

Our study demonstrated that media format did not affect learning achievement. While video may have been a less efficient presentation format, participants rated it as the most engaging. Knowledge of media attributes that positively impact learner performance may inform content creators and educators when designing and distributing materials.

Our results support the incorporation of video into lessons. From a creator's perspective, making videos requires more effort and resources. Thus, we recommend using video to increase engagement at the beginning of a lesson and for presentation of content that is more intimidating or challenging to understand. Our study suggests that the most important features of learning materials are clear, concise writing and quality visual aids. If media format does not affect overall learning, then we as educators should aim to present resources that are captivating and visually appealing so that students may engage with and return to them time and again.

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Poster #57: Teamwork in a Flash: Using Rapid Cycle Deliberate Practice to Improve Team-Based Communication in Rapid Response Simulations

Author(s): Sarah Beebe, PhD, APRN, CNM, WHNP; Paul Son, MBA

Institution(s): Bayhealth Medical Center

Abstract Type: Innovation-focused

Background
Rapid Cycle Deliberate Practice (RCDP) is a simulation-based education model commonly used in resuscitation training. (1) RCDP is a simulation-debriefing method where the scenario is conducted in a rapid cycle, split between deliberate practice and directed feedback while advancing the complexity of the simulation. (1,2) This differs from traditional simulation debriefing where the scenario occurs one time and participants debrief the simulation once it has concluded. In graduate medical education training, RCDP has been used for adult and pediatric resuscitation and obstetric emergency procedures. (1,3,4) Although RCDP has been used to improve technical skills in emergency scenarios, (1,2) it has also successfully addressed team-based communication skills. (2,3,5) Teamwork is vital to the success of rapid responses and resuscitation algorithms. (6)

Objectives
A pilot study to improve team-based communication and behaviors in rapid response simulation using RCDP in a community-based graduate medical education program.

Methods
This pilot study employed a retrospective design to investigate the team-based outcomes of RCDP in PGY2 medical residents. Learners participated in two simulated rapid response scenarios using the RCDP approach. Deliberate practice was cycled with facilitator feedback, while advancing complexity as learning objectives were met. Each scenario lasted approximately 2 hours and were designed and conducted in accordance with the Healthcare Simulation Standards of Best PracticeTM. (7) Scenario video recordings were coded for the following observed team communication behaviors: “shared mental model,” “closed-loop communication,” and whether the “team leader summarized the case.” Participants also completed a post-simulation survey using the TEAM survey (8). Coded scenario data was analyzed for frequency and time to first observed behavior. Descriptive analysis was conducted on all variables and paired t-tests on the frequency data from the first and last scenario attempts.

Results/Outcomes/Improvements
Ten PGY-2 residents from a community-based internal medicine program participated in the study. Participant demographics were 40% male, 50% Asian, 10% Black, 40% White, and 10% Hispanic ethnicity with an average age of 32 years. The frequency of team-based behaviors increased within each scenario and across both scenarios. However, these findings were not statistically significant. In Scenario 1, the frequency of team-based behaviors increased by an average of 4.17 behaviors ($p = 0.15$), and 1.17 ($p = 0.34$) behaviors in Scenario 2. Overall, the frequency of observed behaviors increased by an average of 3.5 across both scenarios ($p = 0.16$). Most participants reported positive team-based communication and behaviors on the TEAM survey with mean responses ranging from 3.71 to 4.50 on a five-point Likert scale.

Significance/Implications/Relevance

This pilot study demonstrated positive and improved team-based communication and behaviors during rapid response simulations in the sample population. Although the observational data was not statistically significant, it presents educational significance with an overall increase in team-based behaviors. Additionally, learners reported positive perceived team-based communication and behaviors via survey. Rapid response situations can be chaotic and difficult to navigate for new providers. Improving communication and teamwork through simulation can help these situations run smoothly in the clinical setting. RCDP offers learners an opportunity to practice their skills, correct mistakes, and develop habits overtime that lead to improved team-based communication and behaviors. A larger sample is needed to identify the statistical significance of such an intervention. However, this pilot study demonstrated positive outcomes that warrant further study.

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Poster #58: Development and Implementation of a Graduate Medical Education Program Director Bootcamp

Author(s): Abby Spencer, MD, MS; Dominique Cosco, MD; Mary Klingensmith, MD; Eva Aagard, MD; Tia Drake, BS

Institution(s): Washington University; ACGME

Abstract Type: Innovation-focused

Background
The ACGME mandates that a single Program Director (PD) has the authority, accountability, and responsibility for the program and requires that PDs serve long enough to ensure program stability. High PD turnover is reported in multiple medical specialties; among internal medicine (IM) PDs in 2021, nearly half have been in the role <three years. A 2018 national survey of IM PDs found that 53% considered resigning in the past year. PD attrition is a key performance indicator in program accreditation, and turnover affects trainees and the sponsoring institution by contributing to program instability and poor performance. There are increasing challenges for PDs stemming from institutional financial pressures, heightened responsibilities, competing priorities, generational learners, rapidly changing accreditation requirements, and well-being threats to faculty/trainees. While administrating the program and teaching/mentoring trainees and APDs, PDs must also excel in leadership and management.

Objectives
PDs often have limited prior training in critical leadership and education skills such conflict management, accreditation, curriculum development and change management.

While many national societies offer PD training, off-site program attendance is limited by financial pressures, restricted travel and rapid PD turnover. Additionally, national conferences lack the nuance, local networking, and acculturation to institutional policies, procedures, and priorities.

The goal of this project is to develop and implement a longitudinal GME PD Bootcamp certificate program to enhance the leadership, management, administrative, and medical education skills of our PDs. During PD Bootcamp, attendees have the opportunity to learn from and connect with our local hospital, medical school, and GME leaders.

Our primary objective is to better equip PDs to overcome GME leadership challenges, thrive in their roles, network, and lead successful, innovative, inclusive, and ACGME compliant programs.

Methods
• Performed a robust review of existing GME leadership curriculum for PDs
• Met with key GME, hospital, and medical school stakeholders to develop and complete needs assessment for essential PD competencies
• Developed timeline and outline to achieve PD Boot camp desired outcomes
• Developed comprehensive, innovative, interactive 10-month PD Boot Camp curriculum and certificate program to include monthly half-day interactive in-person sessions
• Recruited diverse speakers with expertise from procedural, non-procedural, residency, and fellowship programs
• Recruited speakers from medical school and hospital legal, HR, and senior administration

• Advertised longitudinal PD Bootcamp across Washington University for course recruitment and registration
• Implement Course- we are currently four sessions into our 10-session course
• Developed robust session and course evaluation to ensure goals are met

Results/Outcomes/Improvements
We successfully developed and implemented a 10-month longitudinal PD Bootcamp certificate program which began in June 2022. Each monthly session includes one to two core curriculum topics critical to PD success; one session has three simultaneous electives to meet the needs of our diverse programs. Diverse faculty and leaders from across Wash U and the hospital deliver the curriculum. Registration for the course reached capacity within an hour of opening enrollment demonstrating need. We collect evaluations from participants after each session. Participants will evaluate the course as a whole at the end. We will also measure impact of PD Bootcamp in collaboration with our DIO by following ACGME and program survey data, PD turnover, and program performance.

From our first four sessions, 96% of participants agree/strongly agree that session objectives were achieved. The mean rating of all sessions to date is 4.7/5. Participant comments have been positive, constructive, and appreciative.

Significance/Implications/Relevance
Our PD Bootcamp certificate program has the potential to enhance the knowledge, skills, engagement, results, and longevity in the role of our PDs and aspiring PDs. Session evaluation comments include “Helpful to learn about timelines, dates, and priority planning, thank you!,” “I have a better understanding of oversight, responsibility of PD versus DIO,” “Yearly cycle was an extremely helpful session. I learned so much. These are the kinds of things that new program leadership needs to learn.” Other session evals include "Thank you for the practical tips on building remediation programs,” “Nice to hear from various faculty, diverse opinions, resources given were excellent!,” “Role playing is very uncomfortable but promotes great discussion and insight from other.”

We hope this impact carries forward and enhances the quality of our training programs, the exceptional educational experience of our trainees, and the recruitment and retention of outstanding educators and future colleagues.

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Poster #59: One Sponsoring Institution's Journey Solving a 'Wicked Problem': Addressing Work Hour Violations across Programs

Author(s): Katherine Julian, MD; Lynnea Mills, MD; Jennifer Vogt, MBA; Margaret Damiano, MBA

Institution(s): UCSF; UCSF School of Medicine at Zuckerberg San Francisco General Hospital

Abstract Type: Innovation-focused

Background
Program work hour violations can be considered a "wicked problem"—a problem characterized by conflicts, uncertainty, and dynamic tensions[1]. In 2020, our School of Medicine, the sponsoring institution (SI) for 97 ACGME programs received an institutional citation for work hours because of longstanding programmatic non-compliance with work hours. In fact, six programs received work hour citations that year. Drivers of program work hour violations include resident issues, program scheduling, departmental and health system funding and staffing, and lack of SI intensive oversight. Recognizing that no one stakeholder could control or solve work hour violations, the School of Medicine embarked on a plan to tackle this "wicked problem" and systematically address work hour violations across programs and the institution.

Objectives
1) Identify the various drivers of work hours violations across the SI
2) Create a structure to address and rectify work hours violations across programs and health systems
3) Identify robust data systems that can be used to track work hour violations at an institutional level
4) Identify the necessary steps to change culture across the SI with regard to trainee work hours
5) Apply the structure created to address work hours to other "wicked problems" across the SI

Methods
A Blue-Ribbon Panel was convened at the School of Medicine (SOM) to identify the various etiologies of work hour violations across ACGME programs. From this panel, a decision was made to create a Graduate Medical Education (GME) Executive Oversight Committee to oversee interventions to address work hour violations. This Executive Oversight Committee was composed of SOM leadership (Vice Dean for Education, Designated Institutional Official), finance leadership from both the SOM and the health systems, health system leaders, select department chairs, select program directors and chief residents. Under this leadership structure, the following changes were made: stricter GME work hour scheduling policy, real-time tracking of work hour data using informational technology (IT) tools, individual consultations with non-compliant programs to directly problem-solve issues, health system monetary investments to address staffing issues, and transparent posting and tracking of work hour data.

Results/Outcomes/Improvements
The GMEC enacted a policy that trainees should not be scheduled for greater than 72 hrs/wk and must have one day off in seven (not averaged). An SI work hour dashboard was created and made available to program directors, chairs, and health system leaders. Health systems committed $18 million to hire advanced practice providers, faculty, and staff. IT created a program to track work hours through the EPIC EHR and the institution subscribed to RESQ—a geofencing app to assist trainees with entering work hours. The SI's work hour citation was

resolved in 2021. In 2020, the institution had six programs with work hour citations, three programs with work hour areas for improvement (AFIs) and an ACGME 80-hour survey compliance of 83%. In 2022, the SI had two programs with work-hour citations and two programs with work hour AFIs, and an ACGME 80- hour survey compliance of 94%. The actual number of weekly 80-hour violations in our at-risk programs decreased from a peak of 37 in 8/20 to a nadir of two in 5/22.

Significance/Implications/Relevance
Work hour violations are just one type of wicked problem in GME and a prime example of a problem that has multiple drivers and is not generally easily solved by one particular stakeholder. Moreover, program directors often do not have the finances necessary or control to implement changes across a clinical unit, the clinical learning environment, or a health system. The creation of a GME Executive Oversight Committee, with shared investment and responsibility across stakeholder leaders, provides a model that can be used to solve other complex “wicked problems” in GME.

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Poster #60: Championing System-Wide Improvement: An Early Experience in Traversing the Institutional Self-Study

Author(s): Sheila Julin, C-TAGME; J. Sybil Biermann, MD

Institution(s): University of Michigan, Graduate Medical Education; University of Michigan

Abstract Type: Innovation-focused

Background
Guidance from the ACGME related to the Institutional Self-Study includes a thirty-month model. While the ACGME stipulates a final work product for the initial submission of the Self-Study Summary, the structure to arrive at this remains unspecified. ACGME guidelines surrounding the process of conducting the Institutional Self-Study are largely left flexible and general, allowing institutions the ability to innovate. GME leadership approached this work by launching a 30-week self-study effort leading up to the due date for submission of the Self-Study Summary form to the Accreditation Data System (ADS).

Objectives
As a sizable academic medical center, we aimed to establish a process to optimize stakeholder input while ensuring continued forward progress towards the designated endpoints and ensuring alignment with institutional initiatives and strategic directions.

Methods
Step 1: Assemble Self-Study Stakeholder Team (SSST)
Step 2: Survey GME stakeholders for SWOT analysis. Assimilate SWOT analyses into themes.
Step 3: Kick off meeting of SSST; solidify GME mission and performance analysis, review SWOT data and refine themes, establish future path, solicit aim workgroup volunteers
Step 4: Focused analysis of GME performance in the SI, aims work group develops draft aims related to common themes in SWOT results
Step 5: SSST, Chief Resident Council, and SI senior leadership vote on prioritization of aims
Step 6: SSST reviews results in step #4, votes to adopt 5 discrete aims
Step 7: DIO meets with institutional leaders with aim subject matter expertise and relevant GMEC subcommittees to develop action plans
Step 8: Add aims and action plans to GMEC agenda for review and comment
Step 9: Self Study team meets to review final action plans and ratify
Step 10: ACGME SS Summary form completed by DIO and institutional coordinators

Results/Outcomes/Improvements
This stepped plan allowed for stakeholder input and consensus at multiple points while allowing the GME team to shepherd the process forward to ensure alignment with requirements and timelines. The self-study process, when performed methodically, is an excellent opportunity to facilitate dialog with the C-suite working towards common goals. This approach helped to align the Self-Study process with LCME accreditation reviews, a familiar pathway for leaders which helps appropriately establish and prioritize goals. This method for preparing the Institutional Self-Study Summary uses a consensus method with input at multiple steps from a wide variety of GME stakeholders while also maintaining GME structured oversight to ensure continued progress.

Significance/Implications/Relevance
This structured approach to the ACGME Self-Study ensures compliance, engages stakeholders, while optimizing staff effort and reducing stress on the central GME team, and most notably, propels continuous program and institutional improvements to the benefit of all who train in our GME programs.

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Poster #61: Building a Supportive Learning Environment: Orienting Newly Licensed Nurses to Their Impact on Physician Trainees and the Clinical Learning Environment

Author(s): Steph Schatzman-Bone, MD; Michael G. Healy, EDD; Rebecca Minehart, MD; Jennifer Curran, RN; Roger Gino Chisari, RN, DNP; Brian Nahed, MD; Lori Berkowitz, MD

Institution(s): Massachusetts General Hospital

Abstract Type: Research-focused

Background
The hidden curriculum in GME, described as implicit learning experiences beyond formal learning objectives, is first encountered in the clinical learning environment (CLE).[1] Within the CLE, interprofessional team members play an important role in the professional development of physician trainees, whether they recognize it or not. Nurses in particular play an integral role, as their interactions with physician trainees are ubiquitous. International research has explored the role of nurses in educating physician trainees and young physicians,[2,3] and how nurses and midwives recognize their role teaching physicians.[4] In the U.S. however, there are fewer studies characterizing the role of nurses in physician trainee education. When these interprofessional teams function effectively, the CLE is healthy and supportive; but when they operate poorly, the CLE becomes disjointed,[1] resulting in vicious cycles with adverse effects on the individuals learning and caring for patients.

Objectives
Our aim was to develop a tailored educational intervention via two workshops for newly licensed nurses at Massachusetts General Hospital (MGH), who were working on various units and participants in the Transition to Practice Program (TPP), which is a nationally recognized and accredited nurse residency program. These workshops were focused on interprofessional collaboration and the important contributions that nurses have on the professional development of physician trainees. Our objective was to promote collaboration between interprofessional groups and highlight the contributions that nurses have on the professional development of physician trainees within the CLE. Further, by highlighting the importance of these relationships early in the career trajectories of these nurses, we hoped to impact the lens through which they view their contributions to the CLE, particularly for an individual physician trainee who may be underperforming with the goal of building a more supportive CLE.

Methods
In 2022, a group of 40+ MGH nurses enrolled in the TPP were invited to participate in two 90-minute workshops, which were separated one month from one another. These workshops, built upon prior work,[5] focused on collaborative teamwork, effective communication, the important role of nurses in the professional development of physician trainees, and tactics to improve the CLE for the underperforming physician trainee. In between the two workshops, a booster email was sent, which served as a brief reminder of the fundamental points discussed during the first workshop. A workshop evaluation and a clinical learning environment survey, the Clinical Learning Environment Quick Survey (CLEQS),[6] were completed before/after each workshop. Using Stata 17, the workshop evaluations were analyzed descriptively, independent of one another, and the CLEQS were analyzed using pre-post bivariate comparisons via chi-square or Fisher's exact tests.

Results/Outcomes/Improvements
The workshops were positively received as many participants viewed both as very good or

excellent (workshop 1: 83.3% and workshop 2: 72.2%), learned more than expected (workshop 1: 55.6% and workshop 2: 52.8%), believed the workshop content is quite important or essential for newly licensed nurses (workshop 1: 80.6% and workshop 2: 86.1%), and would very probably or definitely recommend the workshop to the next cohort of newly licensed nurses (workshop 1: 91.7% and workshop 2: 88.9%). Results from the CLEQS suggested that the CLE in which these nurses have been working on were healthy and supportive. Of note, participants largely would recommend their units to colleagues (pre: 92.1% and post: 100.0%, p=NS), felt supported by team members (pre: 97.4% and post: 100.0%, p=NS), felt team members treated each other with respect (pre: 89.7% and post: 85.2%, p=NS), and that the unit's interprofessional team worked together very or extremely effectively (pre: 64.1% and post: 70.4%, p=NS).

Significance/Implications/Relevance

A physician trainee's experience in the CLE is greatly shaped by interprofessional team members, many who are never explicitly aware of their unique impact. Offering team members effective training focused on interprofessional collaboration and ways to support the professional development of physician trainees can prove to be beneficial. Our intervention, delivered as individual workshops during a nurse residency program, represents a feasible mechanism by which nurses can be provided with training that aims to affect the lens through which they view their impact on the CLE. These workshops were well-received and will be iterated and delivered to the next cohort of nurses in the TPP. Additionally, we plan to deliver these workshops to other multidisciplinary members of the interprofessional team and explore the benefits of bidirectional support amongst team members, particularly for those who may be underperforming and can benefit from a supportive health care learning ecosystem.

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Poster #62: A Blended Learning Model for Ultrasound Education in Pulmonary and Critical Care Medicine Fellowship

Author(s): Kunal Gada, MBBS; Timothy Miller, MD; Sahar Ahmad, MD

Institution(s): Renaissance School of Medicine

Abstract Type: Innovation-focused

Background
Bedside Ultrasound (US) is increasingly being used by clinicians for the diagnosis and management in their practice and is invaluable to the care of patients encountered in pulmonary and critical care medicine (PCCM). Training in US for diagnostics is required by the Accreditation Council for Graduate Medical Education (ACGME). Barriers to US training at the PCCM fellowship level include time constraints, lack of formal curriculum, motivation, and trained faculty. These measures can be overcome by having a unique blended model of teaching which does not rely only on trained faculty, or bedside learning but incorporates the use of online learning models. In the case of PCCM trainees, clinical application is presumed to be an internal motivation and it follows that their US training should include an emphasis on clinical applications of the learned skills. In this case, the training is expected to have significant impact as the learning objectives align with learners internal motivations.

Objectives
1)To compare the traditional method of teaching which includes in-person didactics, hands on sessions with the blended method which includes online modules, simulation, in-person didactics and hands on sessions
2)By comparing both the methods, to prove that the retention of knowledge and the hands-on skills is equivalent in both the methods which helps to overcome some of the barriers of training.

Methods
Over the course of six years from 2013-2018, there were 25 PCCM fellows which participated in a mandatory yearlong US program during their first year of fellowship. A formal curriculum was developed. These learners took a pre-test prior to the mandatory course and were evaluated again post course as well as after six months in two aspects: knowledge and hands-on skills.

Medical knowledge testing was done by multiple choice questions and hands-on skills by practical exam. Instructors were PCCM faculty with formal US training in fellowship or completion of a formal national US training course. Fourteen PCCM fellows from 2013 to 2016 were trained by the traditional method of US training with in-person didactics and hands-on clinical session. Nine PCCM from 2017-2018 were trained by the blended method which comprised of online didactics with the help of Sonosim, self-learning with the help of online sources and textbook chapters along with some in-person didactics and hands-on clinical session.

Results/Outcomes/Improvements
We compared the traditional and blended learning methods by T test. For knowledge, in the pretest prior to any intervention, the average score in the traditional and blended method were 32.6 and 29.9 respectively. Similarly, for skills, they were 37.8 and 29.27 respectively. For knowledge, the average post test scores were 77.9 and 69.5 respectively and for skills, 82.4 and 84.6 respectively. For retention, the knowledge score was 74.20 and 73.03 respectively with p value of 0.8 and for skills they were 81.16 and 88.6 respectively with p value of 0.04.

Significance/Implications/Relevance

Based on the score of pre-test, post-test and retention test, there were no significant difference in scores of the PCCM fellows in the knowledge and skills component when their US training was done either by traditional or blended method. It proves that the US training can be done through online resources like sonosim with minimal in-person didactics hence overcoming one of the most common barrier of US training reported – trained faculty. It also showed that the number of hours spent by trained faculty for didactics reduced significantly in blended learning method as the primary source of education was online resources and the time spent by the faculty was to only touch up the key points. Hence, US training can be an integral part of PCCM training and the barriers can be overcome with this blended learning model.

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Poster #63: A House Staff-Led Quality Improvement Project to Reduce Daily Inpatient Laboratory Testing

Author(s): Radhika Arya, MBBS

Institution(s): MedStar Georgetown/Washington Hospital Center

Abstract Type: Research-focused

Background
Laboratory testing is an integral part of diagnostic medicine. Over the past few years, there has been an increase in the volume of serial laboratory testing in hospitalized patients. While these tests may confer crucial information to guide patient care, daily laboratory testing on clinically stable patients contributes to the overutilization of resources, leading to patient discomfort and iatrogenic complications such as hospital-acquired infections and anemia. Prior studies have suggested that a decrease in daily laboratory testing is safe and does not affect mortality or intensive care unit admissions. However, data regarding synergistic educational and system-level changes to tackle this dilemma is lacking.

We aimed to describe the effect of house staff-led interventions and system-based changes on the volume of laboratory testing ordered by resident physicians on patients admitted to the Internal medicine service.

Objectives
Our quality improvement project aimed to establish laboratory test ordering practices by resident physicians on medical wards and reduce the frequency of unnecessary daily blood draws by house staff-led educational interventions.

Methods
The study was performed at a tertiary care hospital with a large internal medicine residency program. We conducted a retrospective chart review of patients (aged 18-70 years) admitted to the Internal medicine service between August 2021 and September 2021. The order volume for complete blood count (CBC), Basic metabolic panel (BMP), Comprehensive metabolic panel (CMP), Magnesium level, and Phosphorous level, was obtained for each patient. In addition, the length of stay was obtained.

As an intervention, we held interactive didactic sessions and circulated infographics guiding residents and encouraging the use of the ‘Laboratory add on feature’ to avoid multiple phlebotomies. The second phase involved a system-wide limitation of daily lab order sets to a twenty-four-hour period, after which physicians were required to replace the order if needed. Subsequently, the variables mentioned above were obtained as part of the post-intervention phase. Data was maintained and analyzed in Excel.

Results/Outcomes/Improvements
A total of 310 patients were identified in the pre-intervention phase and 140 patients in the post-intervention phase. The average number of laboratory tests, including CBC, CMP, BMP, magnesium, and phosphorous level per hospitalization, was 36.5 in the pre-intervention phase and reduced to 29.8 in the post intervention phase. In addition, there was a decrease in the average number of laboratory tests for each patient per day from 4.37 to 3.38. Lastly, we observed an increase in the utilization of the laboratory add-on feature per patient for each day of hospitalization from 0.25 to 0.37.

Significance/Implications/Relevance

Our study highlights that educational interventions in combination with system level changes are instrumental in laboratory stewardship. This is crucial for imbibing value-based and cost-effective care while prioritizing patient comfort and is an important part of residency training. While our study was limited by its small sample size and inability to comment on mortality or re-admission rates, we hope to pave the foundation for future studies on laboratory surveillance as well as patient satisfaction surveys to ensure judicious utilization of health care resources.

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Poster #64: Launching a Patient Safety Learning Collaborative in a Pandemic – Lessons Learned

Author(s): Mary J. Njoku, MD; Blaine Kenaa, MD; Mangla Gulati, MD, FACP, SFHM

Institution(s): University of Maryland Medical Center

Abstract Type: Innovation-focused

Background
In 2019, UMMC was selected as one of 10 Sponsoring Institutions to form the second cohort of a national learning collaborative focused on engaging residents and fellows in patient safety. The 18-month Patient Safety Collaborative was part of the *Pursuing Excellence in Clinical Learning Environments* initiative, which promotes transformative improvement in the CLEs of ACGME-accredited Sponsoring Institutions. One of the intended outcomes for our participation was to address recurring gaps that were identified during three prior CLER visits. The second outcome was to actively engage learners in the medical center's safety initiatives without increasing workload or work compression by integrating the processes into daily work. In 2020, the pandemic disrupted existing didactic and care delivery which necessitated rapid implementation of alternate methods for learning and patient care. We describe how, amid a pandemic, our team developed learner-centered experiences using the existing medical center processes.

Objectives
Our key objectives in this program were to engage, train, and learn from our trainees when there were safety events and or near misses.

Methods
We applied a three-phased approach: readiness, training, sustaining. The readiness phase ensured organizational commitment from GME, CQO, Executive Leaders. We assembled a multidisciplinary project team. Members were selected for their (1) roles and responsibilities within the institution, (2) ability to inspire engagement (3) involvement in processes that affect patient care, including teaching, managing, working on teams. Members included DIO, CQO, faculty, PDs, CMO, PSO, Risk, CNO, APP, residents, fellows. The training phase developed a process to register trainees for event reviews, provide a toolkit which included the Ishikawa (Fishbone) tool, the Just Culture Algorithm, a process map on the lifecycle of an event report. We trained faculty to facilitate a 15-minute debrief with the learners following the actual event review. The sustain phase, where quality improvement is vulnerable to fail, moved from learnings during the collaborative to standard work for the organization.

Results/Outcomes/Improvements
The project team used familiar, existing medical center resources and processes:
•Just Culture Policy, Algorithm, Toolkit
•GME orientation: Annual introduction to PSQI, IHI courses, collection of site-specific PSQI resources
•UMMSafe: the medical center's event reporting platform includes a single sign-on, directly from the secure EMR
•UMMSU: the medical center's e-learning management system for registration to attend reviews via secure teleconference
•Safety Event (SE) Reports previously reported in aggregate include reports by cohorts. Reports are shared with the project team, program directors, and at the GMEC. Since

implementation of the project, SE reports submitted by physicians – residents, fellows, faculty – have increased along with APP reports. RNs report most events
•Post-event de-brief surveys show an improved outlook on quality and safety at UMMC, increased likelihood to report SEs, increased comfort entering event reports, interest in participation in future SE reviews

Significance/Implications/Relevance
It is feasible to utilize and engage existing resources to develop and provide a high-quality learning experience, while navigating a rapidly changing healthcare challenge.

Based on feedback from the first cohort of participants, the team implemented teleconference-facilitated, 30-minute, small group meetings with mixed cohorts of GME PDs to share the rationale for the project, the processes, the learning toolkit and to identify PD specific approaches to engage residents and fellows. PDs facilitated enrollment of trainees.

Organization of the project was enhanced by the addition of a project manager and by dividing the work into subgroups with defined responsibilities and deliverables.

The project, in the sustaining phase, continues to engage and enroll new residents and fellows to attend actual interdisciplinary clinical learning environment safety event analyses with post-event debriefs moderated by trained facilitators.

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Poster #65: Does Learning Preference Correlate with Preferred Learning Media among Orthopaedic Residents?

Author(s): Gabriella Ode, MD; T Brent Anderson, DO; Stephanie Tanner, MS; Patrick Rosopa, PhD; Brent Ponce, MD; POST Profiling Orthopaedic Surgery Trainees Study Group

Institution(s): Jack Hughston Memorial Hospital; Prisma Health Upstate; Clemson University Department of Psychology; Profiling Orthopaedic Surgery Trainees Research Study Group; Hospital for Special Surgery

Abstract Type: Research-focused

Background
Professional learning includes acquisition of surgical knowledge as well as surgical skill preparation among surgical trainees. Providing instruction that recognizes and is congruent to individual learning preferences plays an essential role in surgical education. The VARK model is a psychometric assessment which categorizes learners as having preferences for visual (V), aural (A), read/write (R), kinesthetic (K) learning styles. Previous studies using the VARK have demonstrated a predominance of multimodal and/or kinesthetic learning preference among general surgery residents with fewer aural learners. The dominant learning preference of orthopaedic trainees and its correlation with preferred learning tools have not been evaluated.

Objectives
The POST (Profiling Orthopaedic Surgery Trainees) research group is a multicenter collaborative that prospectively collects various psychometric assessments from resident and faculty volunteers at 10 orthopaedic residency programs. As part of the POST study group, the VARK learning styles inventory was administered to all participating residents to determine their individual learning preference. The purpose of this study is to evaluate the learning preferences of orthopaedic residents and determine if this correlates to self-reported preferences in orthopaedic learning media.

Methods
VARK learning preference inventory is a 13-question survey which determines learning preference based on preferred orientation to information processing. The questionnaire outputs 4 different learning style anchors: Visual (V) – preference for learning through graphics or symbols, Auditory (A) – a preference for heard information, Read/Write (R) – preference for written information or Kinesthetic (K) – preference for learning through experience and practice. Subjects with equal preference for two or more anchors were described as multimodal (MM). Participants also reported frequency of use of various learning media for acquisition of orthopaedic knowledge or for surgical case preparation using a five-point Likert scale with a score of five indicating “Always use”. The different orthopaedic learning media were categorized during analysis as V, A, R, and K methods.

Results/Outcomes/Improvements
There were 165 residents (126 male, 39 female) from nine orthopaedic residency programs who participated in the study, with 125 residents completing the VARK. Overall, kinesthetic learning was the most frequent dominant learning preference followed by visual, multimodal, read/write and aural (Figure 1).

The most frequently utilized learning media for general orthopaedic knowledge acquisition was Question-based E-learning and List-based E-Learning (Figure 2A) which are examples of V and

R learning modalities respectively. The most frequently utilized learning media for surgical case preparation was Web-Based Surgical Videos and Surgical Technique Textbooks (Figure 2B), which are V and R learning modalities respectively. There was a significant correlation between preference for using R learning media for surgical case preparation among R learners.

Significance/Implications/Relevance

The vast majority of orthopaedic trainees evaluated in this study were kinesthetic learners. However, this did not always correlate with preferred learning media. Orthopaedic trainees most frequently use online resources such as practice question-based learning (visual media) or list-based learning (read/write media) from for knowledge acquisition, while for surgical case preparation, residents used web-based surgical videos (visual media) and surgical technique textbooks (read/write media) most frequently. As fundamental knowledge in the field of orthopaedic surgery continues to expand, methods for assimilating information in the digital age also continue to advance. For that reason, a better understanding of how learning preferences influence consumption of orthopaedic information is needed.

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Poster #66: Emergence of High-Performing Team Principles in IGNITE (Improving GME Nursing Interprofessional Team Experiences)

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Institution(s): Denver Health; Wake Forest University; Massachusetts General Hospital; The University of Chicago Medicine; NYU Langone Health

Abstract Type: Innovation-focused

Background
Enhanced physician-nurse collaboration improves patient outcomes by reducing mortality, medical errors, and length of stay. Current interprofessional clinical learning environments (IPCLEs) rarely engage residents with nurses and have not been grounded in frameworks related to high-performance teams. Studying interprofessional experiences among different healthcare providers is needed. In response, leaders at the University of Chicago Medicine developed the Improving GME Nursing Interprofessional Team Experiences (IGNITE) program. The aim is to engage different healthcare professionals in institutional performance improvement through approaches at the unit and institutional levels. IGNITE has received support from the Accreditation Council of Graduate Medical Education (ACGME) Pursuing Excellence Initiative and the Macy Faculty Scholars program.

Objectives
Prior work from our group has demonstrated that units that employed IGNITE teams to improve interprofessional collaboration had lower lengths of stay, cost savings, and higher clinician engagement scores (physicians and nurses) in terms of teamwork on Press Ganey Surveys (Arora, et al. Healthcare 2022). The aim of this project was to evaluate the experience of participation in Improving GME Nursing Interprofessional Team Experiences (IGNITE) on the longitudinal unit-level projects, which took place in 9 service lines: general medicine, general surgery, pediatrics, neurology, obstetrics/gynecology, orthopedic surgery, oncology, urology, and otolaryngology. Using qualitative analysis, we investigated IGNITE's impact on resident and nurses' perceptions of interprofessional collaboration, and specifically, emerging high-performing teams domains.

Methods
All IGNITE members were invited to take part in 30-minute semi-structured interviews with trained sociologists (September-November 2019). Our IRB approved the study and participants were given a $10 gift card to Starbucks. Interviewers were not associated with IGNITE. Questions were derived from research on the "big five" components of teamwork: Leadership, mutual performance monitoring, backup behavior, adaptability, and team orientation (Salas, Sims, Burke 2005). Subjects were asked about their interprofessional experience and education pre- and post-IGNITE and how IGNITE might be improved. Responses were uploaded to NVIVO for analysis and were coded using grounded theory analysis by an independent reviewer. Selective coding was used to define themes until saturation. A second independent reviewer coded the data, the interrater reliability was k = 0.61. Finally, a member check was performed to ensure an accurate representation of the study population.

Results/Outcomes/Improvements
Sixteen participants (five residents, 10 nurses, and one social worker) across six units were interviewed. Analysis showed the emergence of high-performing team principles: Psychological safety (“it was sort of a judgment-free open-minded team.” - Resident”), effective team communication-shared goal setting, definitive roles, holding teammates accountable, and backup behavior. Personal and institutional reflections noted enhanced community and relationship building (“Having mutual recognition of one another…And I think before that did not exist.” - Nurse), a better understanding of interprofessional roles, culture shifts, improved patient care, hospital leadership supported success, and IGNITE personnel supported success. Residents understood the nursing workflow better. Nurses mentioned that they appreciated the challenges residents faced more. Beyond the enhanced individual relationships and understanding, the noted culture shift demonstrates influence beyond IGNITE participants.

Significance/Implications/Relevance
IGNITE participants described team characteristics consistent with high-performance teams. Participants felt an increased sense of community, improved understanding of roles, and institutional culture shifts extending beyond IGNITE team members. A supportive institutional environment was critical in developing a successful interprofessional clinical learning environment. The results of this study provide a reason to continue developing and studying the IGNITE model to improve interprofessional collaboration that supports “teaming”. The next steps include ensuring the sustainability of IGNITE, evaluating the adaptability of teams in the setting challenges to the healthcare system, and spreading the program to additional units that are in need of enhanced teamwork.

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Poster #67: Applying Illness Scripts Theory to Climate Health Equity: Pilot Evaluation of a Multi-Residency Educational Symposium

Author(s): Patam Sazegar, MD

Institution(s): Kaiser Permanente San Diego Family Medicine Residency

Abstract Type: Innovation-focused

Background
Climate change is a public health crisis that disproportionately affects vulnerable populations. A 2021 joint statement from the editors of 230 health care journals summoned health professionals to champion a “sustainable, fairer, resilient, and healthier world.” Despite calls for integrating climate change into medical education, few resources exist to guide curricular development. Illness scripts are an educational tool known to improve clinical reasoning and the application of new knowledge.

Objectives
1. To acquire knowledge about common primary care conditions impacted by climate change and their impact on vulnerable populations
2. To acquire skills in the design and implementation of educational symposia about climate change
3. To learn about creating illness scripts for common planetary health topics and incorporating new knowledge into patient counseling

Methods
A series of interactive workshop sessions was developed by a multi-institutional working group in San Diego, California using the 'illness scripts' framework to better educate residents about common medical conditions adversely impacted by extreme weather conditions. An inaugural multi-residency three-and-a-half-hour educational symposium, held in April 2022, consisted of breakout sessions on updating climate-centric illness scripts and plenary sessions about planetary advocacy and plant forward nutrition. Residents from all four San Diego-based family medicine residency programs attended the workshop. A pre- and post-test survey, circulated to all residents using a QR code on their mobile devices, measured self-reported confidence in climate-focused patient counseling for common medical scenarios. Data was analyzed using the Kruskal-Wallis test by ranks analysis.

Results/Outcomes/Improvements
A total of 60% (46/77) of residents completed the pretest and 38% (29/77) completed the posttest. Mean survey scores (pre/post) measuring participants' self-confidence in undertaking advocacy efforts (2.78/5.07) and in discussing health impacts of extreme weather on cardiac (2.13/5.17), respiratory (2.47/5.41), psychiatric (2.50/5.17) and obstetric (2.13/5.41) conditions were all statistically significant at $p<0.001$. Residents were also asked “During times of extreme weather how often do you anticipate discussing medication dose adjustments” with 90% responding ‘<10% of the time’ on the pretest but 40% responding ‘>50% of the time’ on the posttest.

Significance/Implications/Relevance
A multi-residency symposium leveraging the collective expertise of local resources and application of illness scripts theory is a promising strategy for improving education and care delivery for common medical conditions adversely affected by climate change.

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Poster #68: Completing the Picture: Well-Being Assessment of the Full Team in Academic Medicine

Author(s): Megan Christofferson, BA, C-TAGME; Gretchen Shawver, BS

Institution(s): Stanford University

Abstract Type: Innovation-focused

Background
Well-being is a major focus for graduate medical education and ACGME. The well-being pathway in Clinical Learning Environment Review 2.0 highlights not only the well-being of faculty and trainees but also the importance of promoting “well-being across the clinical care team to ensure safe and high-quality patient care.” While the clinical care team usually includes only those who have direct patient contact, it can be argued that administrators also play a crucial role on this team with the support they provide health professionals. Many institutions assess well-being using surveys; however, the same survey tools are not always used for all employees, and some groups are excluded entirely. The annual ACGME survey includes well-being assessments for core faculty and residents, yet further assessments with other groups would help to fully understand trends. Assessing the well-being for the whole clinical care team is essential to determine key drivers for enhancing well-being for all.

Objectives
1. Measure the well-being of clinical and administrative staff who contribute to the clinical learning environment for trainees.
2. Provide anonymous, aggregate reports on well-being for divisional and departmental leadership to use in planning quality improvement initiatives to address well-being and engagement.

Methods
Using aggregate reports from the annual faculty and resident ACGME surveys on well-being, a new survey was built using Qualtrics (Provo, Utah). All questions from the ACGME surveys were included with the addition of two questions pertaining to respondents’ division and role to allow for filtering and the creation of group reports and an optional comment section. No other identifying or demographic information was collected to protect anonymity. The survey link was distributed by an administrator in the division via email to the target groups. Participants were given two weeks to complete the survey; at that time, if at least four responses were collected, an aggregate report was generated and distributed to each team to guide discussions on potential improvement efforts. Survey distribution began in May of 2022 with one administrative group and is still occurring on a rolling basis. This study was determined to be exempt by the Stanford University Institutional Review Board.

Results/Outcomes/Improvements
Surveys have been distributed to two divisions in the Department of Pediatrics at Stanford: two groups of administrators (AAs) and one group of advanced practice practitioners (APPs). Surveys had a 93% response rate across all groups (n=27). A majority in all groups agreed or agreed strongly to feeling “worn out and weary after work” and needing “more time than in the past in order to relax.” While one division was neutral or agreed that “the amount of work [they are] expected to complete in a day is reasonable,” a majority in the other division disagreed. A majority of APPs disagreed that they “have enough time to think and reflect.” They were split on whether they “participate in decisions that affect [their] work,” “work in a supportive work

environment," and find "work to be a positive challenge." Positively, a majority of respondents in all groups agreed that they found "new and interesting aspects in [their] work" and found their "work to be meaningful."

Significance/Implications/Relevance

Well-being surveys conducted by ACGME on an annual basis provide crucial data points for programs planning improvements. However, they do not assess the well-being of everyone who contributes to the clinical learning environment. This study is the first to investigate the utility of conducting the same survey in other groups to develop a more robust picture of well-being across roles in an academic work environment. By generating aggregate reports using the same methodology used for the ACGME surveys, comparison can more easily be done across groups to determine key drivers to impact the well-being of everyone in the learning environment. Trends that require action on an institutional level may also be more readily apparent when larger groups are surveyed. Next steps include expanding to other groups within the surveyed divisions and other departments at Stanford. Plans are underway to expand to other institutions and repeat the survey in spring of 2023.

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Poster #69: Balance, Resident Wellness

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Institution(s): Novant Health New Hanover Regional Medical Center, South East Area Health Education Center

Abstract Type: Innovation-focused

Background
In 2017, ACGME added a wellness requirement, sparked by an increasing concern for resident wellbeing across the Graduate Medical Education (GME) community. At New Hanover Regional Medical Center (NHRMC) GME, our primary concern was to ensure the safety of our residents, faculty, and staff. Upon reviewing the national suicide rates during the medical school to internship year, we determined that our Employee Assistance Program was insufficient and that residents required more holistic support throughout this transitional period. First, we created a Crisis Intervention Plan with a 24/7 hotline and triage protocol to keep the most at-risk residents safe.

Then, in 2018, we created the Balance Residency Wellness Program that focuses on individual wellness coaching and goal setting for residents. This systems-level approach to wellness views wellness as a continuous journey, not a destination, and includes several stages: analyze, design, develop, implement, and evaluate.

Objectives
The Balance Residency Wellness Program's mission is to empower residents to cultivate healthy coping strategies to maintain their personal wellbeing. We work closely with the interns to analyze, design, develop, implement, and evaluate their ability to balance the components of wellness. Our objectives include:
•Ensuring the safety of all GME team members through a Crisis Intervention Plan, policy, and procedure
•Establishing a personal wellbeing baseline through a guided self-assessment
•Designing and develop a wellness plan with goals based on personal evaluation
•Implementing the personal wellness plan with support from a Balance Coach
•Evaluating resident progress based on personal metrics and survey data

Each resident has unique stressors and requires unique types of support. By starting with a wellness coaching and goal setting session, we allow interns to identify their needs and build trusting relationships, increasing the likelihood they will seek help when they need it.

Methods
Each intern meets with a Balance Coach for 30 to 45 minutes about four to six weeks into their intern year, at which point they complete an individual wellness assessment. The wellness assessment focuses on the primary components of wellness (i.e., sleep, nutrition, coping, professional growth, etc.) and allows the individual to reflect on their current feelings of wellbeing in each of the respective areas. After completing the assessment, the intern creates a S.M.A.R.T. goal based on the areas of need outlined in their personal assessment.
Once they have completed their goal, they are provided with tools and resources to help them achieve their goals. To ensure ongoing support and accountability, they have follow-up meetings with their trusted Balance Coach as needed and at the end of every quarter. Working

with a Balance Coach gives them the opportunity to share more openly because they can confide in a trusted professional who they do not report to or interact with daily.

Results/Outcomes/Improvements
In the 2018-2019 pilot year, 73% of residents said they knew healthy ways to deal with their stress, and 93% said they wanted to continue the biannual initiative. Based on this feedback, the Balance Program continued and from 2019-2020, 88% of interns said they knew how to handle a crisis and 87% reported that resources were adequate. In the pilot year, 67% of residents had also reported that work sometimes prevented them from tending to their personal health needs and in the 2019-2020 year, this dropped to 50%.

To address higher rates of burnout caused by COVID-19, we developed additional programs like surf retreats, team exercises, and social events, to boost morale. Additionally, we hired a full-time Wellness Coordinator, who is coaching residents beyond their first year, and coordinating yoga and meditation classes, newsletters, workshops, and wellness presentations. This year, on average, residents have scored themselves as having an overall well-being of 6.8 on a 1-10 scale.

Significance/Implications/Relevance
ACGME identifies psychological, emotional, and physical well-being as critical components of developing caring, resilient physicians. The Balance Wellness Program uses the instructional systems design model to analyze, design, develop, implement, and evaluate a person’s ability to balance the components of life that keep them happy and content. It is a system of individually centered life coaching strategies that create opportunities for residents to flourish within these core areas of wellness, while creating a safe, supportive community and learning environment along the way. When we help residents develop healthy coping strategies, we show them they are not alone on their journey and where they can turn to when they need help. As our Program expands, we will continue tracking its growth through both quantitative and qualitative assessments. Using a train-the-trainer process, the Balance Wellness Program’s individualized, holistic approach can be applied to larger GME institutions.

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Poster #70: The Paradox of the Depressed Resident: Higher Depression and Reduced Help-Seeking

Author(s): Gregory Guldner, MD, MS; Brendon Ellis, MA; Gabrielle Riazi, MPH; Ann Brafford, JD, MA; Jessica Wells, PhD; Jason Siegel, PhD

Institution(s): Claremont Graduate University; HCA Healthcare Graduate Medical Education

Abstract Type: Research-focused

Background
Resident physicians are at risk for both depression and suicidal ideation. Despite treatment options being available most residents do not seek help. While there are likely many reasons for the low rates of help seeking among depressed residents, one important barrier may be changes in thinking caused by the depression itself. Those with depression may not appraise treatment options as likely to be helpful, and therefore may simply avoid initiating contact with potentially helpful resources, even when they are readily available. If true, the typical institutional approach to resident depression consisting of telling residents, “If you need help, call this number” may be ineffective for the most depressed residents.

Objectives
The current study sought to determine the association between levels of depressive symptoms and help-seeking intentions. Furthermore, we examined whether the association between depression and help-seeking intentions may be mediated by lower help-seeking outcome expectations among depressed residents. These associations can predict which interventions for improving resident help seeking will be more likely to succeed among residents with depression.

Methods
Between November 2017 and August of 2020, three studies with a total of nine waves of data were conducted using computerized surveys completed by residents in multiple institutions and specialties sponsored by HCA Healthcare. Surveys included validated measures of depression (CES-D and PHQ-9), help-seeking intentions, and help seeking outcome expectations. To increase the confidence in the associations, the depression survey was changed after year 1, and the help seeking intention measure changed after year 2. A Bayesian multilevel linear regression model was used to test the mediating effect of help seeking outcome expectations on the relationship between depression and intentions to seek help.

Results/Outcomes/Improvements
Two thousand two hundred ninety-nine resident responses from 19 different specialties were included in the analyses. Across all nine waves of data, there was a large inverse association between level of depression and help-seeking intentions (ß = -0.31, -0.27, -0.32, all $p < 0.01$): the more depressed the resident, the less likely they were to seek help. This association persisted regardless of the depression survey or help-seeking intentions scale used. There was also a moderately large indirect effect, showing that the association between depression and help-seeking intentions is mediated through help-seeking outcome expectations (proportion mediated = 48%, 46%, 51% by study, all $p < 0.01$).

Significance/Implications/Relevance
The greater the level of depression among residents the less likely they are to seek help. This association is partially due to depression related changes that undermine the idea that seeking

help will result in help. Those residents with the greatest depression, and therefore the most need for help, may not ask for help, because they do not believe asking for help will actually result in changes for the better. This suggests that interventions that simply provide access to resources (“if you need help, call this number,” also called “opt-in”) will potentially fail for those residents most in need. Interventions that schedule all residents for therapy and then allow cancellation if not needed (“opt-out”) may be particularly beneficial in this setting, as they bypass the impacted thinking pattern that creates the paradox of the depressed resident. They do not need to engage in help-seeking initiation because it is initiated by the program or institution by default.

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Poster #71: Creating a Culture of Well-Being in Internal Medicine Residency

Author(s): Benjamin Tanenbaum, MD; Vandana Nagpal, MD

Institution(s): UMass Memorial Medical Center

Abstract Type: Innovation-focused

Background
Medicine can be both rewarding and stressful. Burnout among medical residents is pervasive, with one study estimating resident burnout rates of approximately 55-76% (3). This can interfere with personal wellness and patient care, leading to negative impacts on both. Outside of fixing systems issues, preventing burnout may be best accomplished by promoting individual wellness and providing support. Building resiliency skills during residency may be more effective under guidance and with structured interventions (6-7). Past areas of focus in reducing burnout for healthcare workers have focused on individual interventions such as yoga and mindfulness and have shown some proof of concept (8).

To supplement UMass's Internal Medicine (IM) residency program's inbuilt structure of social events and retreats, we weaved wellness interventions through the fabric of residency to enhance residents' overall well-being through improved self-awareness, peer support and increased sense of community.

Objectives
While many of the issues that contribute to physician burnout are systemic in nature, we seek to promote individual well-being, where possible, through a longitudinal wellness curriculum designed to:
- Practice mindfulness/reflection
- Foster self-care, compassion, humanism, and empathy
- Learn various coping skills to help ease the burden of workplace stressors
- Promote a supportive learning environment through open communication and support from both program and peers

We also seek to create a model for increasing resident wellness that is measurable and can serve as a model for other programs within the system and/or those nationally.

Methods
We formed a Wellness Committee with a faculty mentor and resident leaders. This resident-driven committee worked on building community and camaraderie among the residents through embedding interventions (wellness sprinkles) throughout residency.

We created buy in from leadership in both the Residency and the Department of Medicine for interventions; specifically, we introduced quarterly group sessions for each post-graduation year with Graduate Medical Education health psychologists during conference time, created a Peer Buddy mentoring program to pair interns with a senior resident to help mentor and navigate through the transition to intern year, and biweekly pet therapy visits with a service dog. On a personal level, residents were invited to do wellness inventory and self-care plan biannually. We also designed guided weekly five-minute mindfulness/reflection incorporated this into the beginning of our morning report conference that encouraged gratitude, reflection, and introspection.

Results/Outcomes/Improvements
Anonymous surveys were conducted on wellness initiatives and input about future direction and desired interventions. There was overwhelming positive feedback from residents (>90% survey responders) as shown below:

Quarterly sessions with health psychologist:
-It was nice to voice frustrations with peers and hear their complaints and concerns.
-Hearing from colleagues regarding their similar and unique frustrations was helpful.
Peer buddy program:
-My buddy made me feel welcome in the program
-My buddy answered all the questions about the program
Thursday Morning Reflection:
-Great opportunity to connect, build community, feels therapeutic.
-We got to share positive experiences which help to create positive vibes for the rest of the day/week.

Significance/Implications/Relevance
We have been able to implement individual and peer network-based activities in a longitudinal format in our residency. These initiatives 'piggy-back' onto the normal workday (existing conference times). The initiatives engage residents individually and in their trainee community which we hope will lead to a change in culture.

We have already seen the positive impact of these interventions through improved scores on program's annual ACGME survey. Our next steps include improving access to health psychology by creating an opt-out model of biannual individual (1:1) wellness sessions which will be a mini-assessment of how each trainee is doing. This preventive model has the potential to break barriers to access and improve the discrepancy between the rates of burnout and depression in medical trainees and the underutilization of counseling services through normalization and program support. If successful, our institution will show that opt-out wellness services should be the norm.

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Poster #72: Reduce Burnout with Coaching: A Community Hospital Outcome of a Resident Wellness Curriculum

Author(s): Luke Li, MD; Joseph Bahgat, MD; Rebecca Newman, MD; Forugh Homayounrooz, MD

Institution(s): Stamford Hospital

Abstract Type: Innovation-focused

Background
Stress, depression, burnout, and anxiety are commonly reported during residency and drive suboptimal patient care practices, more perceived medical errors, and decreased empathy for patients (1). There is a dire need for active interventions directed toward resident wellness in today's climate. Professional coaching has been explored in other industries with less attention in medical residency. Coaching employs behavior modification techniques towards goals including work-life balance, resilience, and health maintenance. Herein we describe outcomes of a novel resident wellness curriculum focused on professional wellness coaching and dynamic team activities.

Objectives
The aim of this study is to improve burnout, mood, well-being, and provide an additional support system for residents.

Methods
A prospective cohort study was conducted from January 2021 through January 2022, at Stamford Hospital, a university-affiliated community hospital at Stamford, Connecticut. All residents (n=66) were surveyed in internal medicine (n=20), general surgery (n=17), family medicine (n=15), and obstetrics-gynecology programs (n=14) at Stamford Hospital via SurveyMonkey®. Resident burnout, mood, and wellbeing ratings, as well as attitudes towards institutional support, were assessed via five-point Likert scale prior to and following implementation of the wellness curriculum. This curriculum implemented February through December 2021 featured individualized wellness coaching sessions and dynamic team activities such as watercolor painting, outings, and invited speakers.

Results/Outcomes/Improvements
Response rate was 80% in the pre-intervention compared to 61% in the post-intervention survey. Significantly more residents described their mood favorably following the intervention (49% from 20%, p=0.027). Residents felt significantly less frequently burned out (31% from 44%, p = 0.001) and felt less callous towards people (24% from 36%, p = 0.055) following intervention. Further, satisfaction with residency progress improved from 37% to 63% (p = 0.041) and more respondents agreed with the statement, "I am satisfied with the level of institutional support I receive" (46% to 66%, p = 0.026). Resident reported satisfactions with interventions were as follows: dynamic team activities (66%), individualized wellness coaching (47%), and guest speakers (42%). Four residents attended more than four coaching sessions. Five residents cited coaching as their most appreciated activity.

Significance/Implications/Relevance
This exploratory study demonstrates attitudes in well-being categories prior to and following introduction of a novel curriculum featuring individualized wellness coaching. There was an improvement in resident well-being parameters including mood, burnout, and institutional

support. Observed rates of burnout are lower than the national average. The project is renewed this year for the internal medicine residency program with particular emphasis on access to one-on-one coaching and continued team building activities. There is a need for active interventions directed toward resident wellness in today's climate. High appreciation regarding professional wellness coaching by a subset of residents may indicate a potential role for tailoring this intervention during residency training.

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Poster #73: Racial and Ethnic Disparities in Situational Judgement Testing

Author(s): Mark Norris, MD; Christopher Conley, MD; Rachel Achu, MD

Institution(s): Boston Medical Center

Abstract Type: Research-focused

Background
Situational judgement tests (SJTs) purport to test non-cognitive skills such as professionalism, communication, and empathy. SJTs are used for personnel selection in many fields including the medical school admissions process. SJTs may be less prone to bias than traditional multiple-choice exams and may increase the diversity of the medical student body.
The effects of race and gender on SJT scores has been extensively studied. Although SJTs are usually scored by computer or by blinded assessors, significant gender (females score higher than males) and racial (non-whites score lower than whites) differences remain. Because many SJTs require a written response, non-native speakers may also be disadvantaged.
SJTs have recently been introduced into the residency selection process. They may slightly increase the diversity of interviewed candidates, but there are no reports of the effects of race and gender on SJT scores in this group.

Objectives
For the 2021-2022 application cycle, the Boston University School of Medicine Anesthesiology Residency program required all applicants to complete a battery of non-cognitive assessments. One of these, Casper®, is an on-line video-based and text-based SJT. The responses are then scored by a group of trained, blinded raters.

Here, we asked two questions:
1) Does the Casper® score provide information that is different from other performance measures (i.e., test scores)?
2) Are there gender, race, or native language-related differences in candidate's Casper® scores? We used US vs. Non-US medical school as a proxy for native language.

Methods
We extracted the fields: AAMC ID, Applicant Name, USMLE Step 1 Score USMLE Step 2 Score, Medical School of Graduation, Self-Identify, and Sex from the CSV file "All Applicants" available through the Association of American Medical Colleges (AAMC) Electronic Residency Application Service Program Directors Workstation (https://pdws.aamc.org/eras-pdws-web/home/dashboardPanel/). We extracted the fields: First Name, Last Name, AAMC (ID), and zScore from second file containing the Altus Suite assessments of all applicants available from Altus Insights (https://insights.altusassessments.com/). These files were combined by matching AAMC ID and Last Name.

We used the Welch Two Sample t-test to compare zScore between males and females and between US and non-US medical school graduates. We used linear regression to compare zScore by self-identified race/ethnicity and to compare zScore and USMLE Step 1 score.

Results/Outcomes/Improvements
We had 1,245 residency applicants who also had a Casper® score. Four hundred sixty-two identified as female, 783 as male. The racial/ethnic distribution was: 512 White, 412 Asian, 106 Black, 126 Hispanic and 89 Other/No Answer. zScores did not differ by gender. There were

significant racial/ethinic differences in zScores. White candidates scored higher than Asian ($p<0.02$), Black ($p<0.001$) and Hispanic ($p<0.001$) candidates. Applicants attending US medical schools scored higher than those attending non-US schools ($p<0.001$). There was no correlation between zScores and USMLE Step 1 scores.

Significance/Implications/Relevance

Residency programs receive an overwhelming number of applications in each Match cycle. Many programs use USMLE Step scores as a first screen to decrease the size of their applicant pool. This approach disproportionately eliminates candidates from underrepresented in medicine (URiM) groups. Our experience suggests that although SJTs measure different skills than traditional multiple-choice tests, their results are still biased in favor of White applicants. As with other standardized tests, existing, hidden biases in the development, administration, and interpretation of SJTs likely contribute to these disparities. Our results suggest that the use of SJTs is unlikely to increase the diversity of a program's applicant pool. Instead, SJTs may further exclude URiM candidates from consideration.

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Poster #74: Responding to Racism in the Learning Environment

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Institution(s): University of Kansas Medical Center

Abstract Type: Innovation-focused

Background
Medical trainees experience interpersonal racism in many forms, from implicit bias to egregious racism (1-3). Chronic exposure to racism has a detrimental effect on academic performance and well-being (4-6). This is compounded by failure of medical educators to respond appropriately, yet many faculty feel ill equipped to do so in clinical encounters (7,8). If able to overcome the flight or freeze response, staff may employ communication skills that rely on alignment with the offender which can cause more harm (8). This is because conventional understanding of interpersonal communication has led to frameworks that treat racist encounters like any other difficult conversation, by aiming for understanding and by avoiding scripting (9,10). We argue that racist encounters are unique and require direct language that is available under stress. Scripting is an effective way to navigate challenging conversations and is useful tool for responding to racism in the learning environment (11,12).

Objectives
We aim to provide a structured framework for medical educators to identify and distinguish microaggressions and egregious racism in clinical encounters. We will discuss the idea that responding to egregious racism calls for communication that is distinct from traditional interpersonal communication strategies employed in a medical encounter to create a safe learning environment and to avoid inadvertently adding to harm of the learner. We aim to improve confidence in ability to respond to racism by providing scripted language with an opportunity to practice and debrief in a small group workshop.

Methods
Our institution's GME Office sent out a voluntary sign up for a faculty development workshop to program directors, assistant program directors and core faculty across all GME programs. The session was created as a two-hour virtual workshop, starting with a didactic portion on structural racism in medicine and a discussion of bias, microaggressions and overt racism. We provided a novel framework to respond to racism in the learning environment with four components: Identify Racism, Respond Appropriately, End the Encounter, and Support the Learner (IRES). We shared a scripted language guide to understanding the most appropriate way to respond to each situation. Participants were then assigned to breakout groups each with a facilitator for a practicing scripted language and debriefing. Participants completed 13 question RedCap survey assessing their perceived confidence in addressing racism pre and post session.

Results/Outcomes/Improvements
Results will be collected immediately after the session and housed in RedCap. The investigators will conduct a qualitative analysis of survey responses. We anticipate that participants will have increased confidence in the ability to respond to racism and microaggressions after completing the workshop.

Significance/Implications/Relevance
This faculty development workshop provides a novel framework for effectively responding to

racism in the learning environment by providing emphasizing the unique approach needed to address overt racism and providing scripted language to help facilitate this.

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