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Abstracts

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## 2025 ACGME Annual Educational Conference Poster Hall

Abstracts displayed in the 2025 ACGME Annual Educational Conference Poster Hall were selected from the 2025 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.

*Content displayed in this document is as presented in the authors' submission to the 2025 Annual Educational Conference Call for Abstracts. Poster content of the abstract in this document may vary from the poster displayed in the on-site Poster Hall.*

## 2025 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 its poster reception and Keynote Address in his memory.

## **Poster #1: Competency-Based Graduation: Attracting Top Medical Students to Your Residency Program and Building a Stronger Local Health Care Workforce**

**Author(s):** Christina Vitto, MD; Sally Santen, MD, PhD; Joel Moll, MD; Rebecca Forrest, MD; Peter Moffett, MD; Nicole Karjane, MD; Melissa Bradner, MD

**Institution(s):** Virginia Commonwealth University (VCU); University of Cincinnati

**Abstract Type:** Innovation-focused

### **Background**

The Competency-Based Graduation (CBG) program at VCU School of Medicine (SOM), established in 2018, offers an accelerated path for students targeting specific specialties. As three-year medical programs (A3YP) grow in popularity, they provide residency programs an opportunity to retain high-performing students. Students are evaluated on predefined competencies, ensuring readiness for safe, patient-centered care.

This A3YP model reduces student debt, accelerates students with a known career passion, while helping retain top talent and facilitating a smooth transition from medical school to residency. It also promotes professional identity development through early career mentoring. However, A3YP may lack rigorous assessments for competency-based medical education (CBME). The CBG program at VCU-SOM emphasizes competence as the graduation standard.

### **Objectives**

The aim of this innovative report was to assess the impact of implementing an accelerated, competency-based graduation program. We examined the effectiveness of using a clinical competency committee in decision-making processes. Additionally, we evaluated the performance and outcomes of medical students as they transitioned into residency and tracked their progress following residency completion.

### **Methods**

The CBG program adopts a Clinical Competency Committee (CCC) model, commonly used in graduate medical education (GME) but unique in undergraduate medical education (UME). Throughout the clinical year, the CBG CCC evaluates students quarterly, assessing their progress across eleven key areas. During these meetings, the committee votes to categorize students as 'competent,' 'on track,' 'concern,' or 'not enough information' based on the criteria used by the medical school to determine graduation eligibility. We analyzed the outcomes of these assessments on both CBG students who graduated and those who decelerated and returned to a traditional four-year pathway.

Additionally, we monitored the progress of the CBG students once in residency, gathering feedback from program directors on their milestone achievements, concerns about burnout, and notable milestones such as chief resident appointments, fellowship training, and post-residency employment.

### **Results/Outcomes/Improvements**

The evaluation of the Clinical Competency Committee (CCC) scoring methods showed a positive trend in 'competent' ratings as students neared graduation. As 'competent' ratings increased, 'on track' ratings decreased. Students who decelerated from the CBG program were identified early in the year as having 'concerns' in several areas during the initial two CCC meetings.



Since the program's inception, 33 students have been accepted into the CBG program, with 20 graduating into seven different VCU residency programs. Among those accepted, nine students (27%) transitioned back to the standard four-year program for personal reasons, while four students (12%) transitioned due to academic challenges.

Program directors report that all graduates are progressing appropriately through the ACGME Milestones in their respective specialties, with no significant concerns regarding burnout. Of eligible graduates, 44% have remained as faculty where they trained and 27% have been chief residents.

### **Significance/Implications/Relevance**

Our CBG program effectively identifies and graduates students into residency based on their core clinical competencies. Extended interactions with residency programs foster relationship-building and deeper mentoring, improving students' confidence in their specialty choices and increasing the likelihood of remaining in the same program post-training. Additionally, students experience accelerated professional identity formation and have opportunities for longitudinal research that benefits both them and their residency programs.

The program uses a CCC for student evaluation, which is uncommon in UME, but effective. Composed of members from both UME and GME, the CCC ensures thorough assessments of student progress and readiness for graduation.

In summary, the CBG program offers a structured pathway that prepares students for residency, relying on ongoing analysis and feedback from residency directors for continuous improvement.

### **References**

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## **Poster #2: Accelerating into Residency: The Benefits of Accelerated Three-Year Medical School Programs for Your Residency Program**

**Author(s):** Alicia Gonzalez-Flores, MD; Judith Brenner, MD; Christina Vitto, MD; Annette Reboli, MD; Lisa Strano-Paul, MD; Joan Cangiarella, MD; Betsy Jones, EdD; Sally Santen, MD, PhD

**Institution(s):** University of California Davis; NYU Grossman Long Island SOM; Virginia Commonwealth University; Cooper Medical School of Rowan University; Stony Brook School of Medicine; NYU Grossman School of Medicine; Texas Tech University; University of Cincinnati

**Abstract Type:** Innovation-focused

### **Background**

Over the last 10 years there has been increased interest in accelerated three-year programs (A3YP) to address physician workforce shortages, address increasing student debt, and to provide individualized education pathways into specific specialties. There are currently 32 A3YP in the US and 20 of these programs have graduates who have entered a graduate medical education (GME) program. As more medical schools develop their own A3YP programs and as the number of students graduating from an A3YP continues to grow and enter the NRMP Match, GME programs will start seeing more applicants from an A3YP. Furthermore, as more medical schools become interested in innovative A3YP, residency programs may be asked to partner in the development of these programs. Increasing the awareness and visibility of these three-year programs will help the GME community better understand these applicants and potentially increase partnerships among institutions.

### **Objectives**

The goal of A3YPs is to graduate students in three years instead of the traditional four years. Developing and implementing A3YP results in reduced student debt, enhances career mentoring, and allows for an extra year in the workforce. Many programs link their graduates to their own residency programs; however graduates can and many have applied to GME programs across the country. Linking GME to UME allows for early and frequent institutional collaboration facilitating the transition into residency. To better inform the GME community more broadly, the objective of this submission is to report the outcomes of the A3YP programs. We have tracked the number of graduates from A3YP and the specialties they have entered. Through a national consortium of A3YPs, we are working to evaluate the outcomes of graduates from A3YP, including United States Medical Licensing Examination scores, residency milestones, and effect on debt among other metrics.

### **Methods**

All A3YP include at least 130 weeks of instruction as required by the Liaison Committee on Medical Education. Program length differs by school: some schools have instructional weeks before the start of medical school or between the summer of Years 1 and 2. Most programs have a directed pathway into residency. Some programs focus on a single specialty while others have a pathway into multiple specialties. GME engagement starts early, with some program directors involved in the student selection and mentoring. Students typically have a faculty advisor in the GME program and spend significant clinical time at the GME program, interact with the residents, join their didactics and learn the culture of the program early on, thus facilitating the transition into residency. Nearly all programs participate in the NRMP. A3YP students apply to residency in the middle of their third and final year, which means that their residency applications tend to be leaner compared to the four-year graduates.

**Results/Outcomes/Improvements**

From 2013 to 2024, 20 medical schools have graduated over 800 students from A3YP. There are increasing numbers of graduates every year with 98 in 2021, 151 in 2022, 162 in 2023, and 176 in 2024. Depending on the model in use, graduates enter specific specialties (most often primary care related), but may include all specialties at their partnered residency programs. Among schools with A3YP, 91% (29/32) of the programs have a directed pathway to residency at their home institution. A few programs have a NRMP waiver, and their graduates do not enter the match. Early data based on residency milestones suggests that A3YP graduates perform similarly to four-year graduates in residency. Multiple programs have selected A3YP graduates as chief residents and have graduates who are now part of their faculty.

**Significance/Implications/Relevance**

As the number of A3YP continues to grow, an increased number of graduates from these programs will enter GME. Though most programs have direct linkage into their internal residency programs, students frequently apply and match outside of those internal programs. As such, it is important that GME programs are aware of the A3YP applicants and their readiness for residency. Data so far demonstrates that A3YP are equally prepared for residency compared to four-year students.

**References**

Santen, S.A.; Gonzalez-Flores, A.; Coe, C.L.; Partin, M.; Brenner, J.M.; Nalin, P.M.; Macerollo, A.A.; Cangiarella, J.; Saavedra, A.; Leong, S.L. Return on Investment of Three-Year Accelerated Programs for Students, Medical Schools, Departments, and Community. *Med Sci. Educ.* 2024, 34, 919–925, <https://doi.org/10.1007/s40670-024-02043-7>.

Cangiarella J, Fancher T, Jones B, Dodson L, Leong SL, Hunsaker M, Pallay R, Whyte R, Holthouser A, Abramson SB. Three-Year MD Programs: Perspectives From the Consortium of Accelerated Medical Pathway Programs (CAMPP). *Acad Med.* 2017 Apr;92(4):483-490. doi: 10.1097/ACM.0000000000001465. PMID: 27805950

### **Poster #3: Burnout Screening, Prevention, and Management in ACGME-I-Accredited Residency and Fellowship Programs: A Survey of Program Directors**

**Author(s):** Rola Itani, MD; Zeinab Aidibe, MD; Salah Zein-El-Dine, MD, FACP; Maya Romani, MD, EMBA, CWWS, TTS, DipIBLM

**Institution(s):** American University of Beirut Medical Center

**Abstract Type:** Research-focused

#### **Background**

Burnout syndrome is a pervasive issue among health care professionals, characterized by emotional, physical, and mental exhaustion and associated with depersonalization and decreased sense of accomplishment. Existing literature highlights the alarming prevalence of burnout among physicians in training in both and developing countries. Despite its significant impact on patient care and physician well-being, burnout detection remains a challenge, and structured prevention and management programs are limited. In 2017, the ACGME revised its Common Program Requirements for all specialties to mandate residency programs to address residents' wellbeing and to enhance the self-care component of professionalism as a response to the high burnout rates. The ACGME program manuals currently include a section on the importance of residents' well-being and addressing burnout. However, no standardized system exists to manage and prevent burnout in in residency and fellowship programs.

#### **Objectives**

This study aims to measure the prevalence of systems in place to identify and manage burnout, assess the current status of wellness initiatives, and identify barriers to the implementation of structured wellness programs in ACGME-I-accredited residency and fellowship programs.

#### **Methods**

A quantitative cross-sectional study was conducted, surveying all program directors of ACGME-I-accredited residency and fellowship programs, accredited up to July 2024 (n=200) across 11 countries. Data were collected via an anonymous online survey, which included demographic information and questions regarding burnout assessment, wellness initiatives, and program interventions.

#### **Results/Outcomes/Improvements**

Sixty-six percent of the respondents were male, and 48% had served as program directors for less than five years. Notably, 66% of program directors reported personally experiencing burnout, with exercise being the most cited coping mechanism (66%). Approximately 50% of residency and fellowship programs screen for burnout and have systems in place to detect it. The majority (78%) of burnout detection relies on self-reporting by residents. While many programs offer workshops to help residents recognize and manage burnout, only 18% have established wellness committees, and just 18% have structured wellness programs. Of these, only one program offers a competency-based wellness curriculum. The most reported barriers to implementing structured wellness programs include time constraints (24%), lack of resident interest (21%), and insufficient institutional support (15%).

#### **Significance/Implications/Relevance**

The findings highlight the need for more robust and structured wellness programs tailored to the specific needs of residents and fellows. Addressing the identified barriers and enhancing wellness initiatives could improve the overall well-being of trainees, while also enhancing the

quality of patient care. These results serve as a critical foundation for the development of future interventions aimed at preventing and managing burnout in residency and fellowship programs.

## **Poster #4: Factors Influencing Psychological Safety in the GME Clinical Learning Environment**

**Author(s):** Carine Zeeni, MD; Halah Ibrahim, MD, MHPE; Salah Zein El Dine, MD; Firas Kreidieh, MD; Rola Itani, MD; Hazem Laali, MD; Rayan Krayyem, MD; Reine Obeid, MPH; Marianne El Khoury, MPH; Monique Shaya, PhD; Fatima Msheik, PhD

**Institution(s):** American University of Beirut; ACGME-I

**Abstract Type:** Research-focused

### **Background**

Psychological safety refers to an environment where individuals feel comfortable expressing ideas, sharing opinions, and seeking feedback without fear of judgment. In medical education, the hierarchical nature of residency can discourage contributions from less experienced members. Recognizing its importance, the ACGME recently included psychological safety as a core requirement in its guidelines.

### **Objectives**

This study aimed to quantitatively assess whether faculty behaviors and faculty-resident relationships enhance psychological safety and whether this is affected by learners' personality traits. We also aimed to qualitatively explore barriers and facilitators in the learning environment.

### **Methods**

We conducted a cross-sectional survey among 340 residents at the American University of Beirut between February and June 2024, assessing personality traits, faculty-resident relationship quality, faculty professional behaviors, and psychological safety. Open-ended questions were used to explore perceived barriers and facilitators of psychological safety.

### **Results/Outcomes/Improvements**

The survey response rate was 86.81% (235), with a completion rate of 69.12% (204). Demographic factors and most personality traits did not significantly affect psychological safety. Linear regression showed that faculty-resident relationship quality was a consistent predictor of psychological safety, even after adjusting for age, gender, and personality traits ( $\beta = 0.0409$ ,  $p < 0.001$ ). Faculty behaviors were not significant predictors once relationships were accounted for. Key facilitators of psychological safety included open communication, supportive mentorship, inclusivity, and viewing mistakes as learning opportunities. Barriers included hierarchical structures, judgmental behaviors, and high workloads. Residents reported that once psychological safety was compromised, it was rarely restored without proactive faculty intervention.

### **Significance/Implications/Relevance**

Quantitative and qualitative findings underscore the importance of faculty-resident relationships in fostering psychological safety. Targeted interventions to strengthen these relationships may be more impactful than focusing on professional behaviors alone. Further studies will examine the effects of psychological safety on residents' experiences.

**Poster #5: A Structured Community Engagement Program During GME is Associated with Intention to Stay and Serve the Surrounding Community After Training**

**Author(s):** Stephen Estime, MD; Edwin McDonald, MD; Chuanhong Liao, MS; Jeremy Podczerwinski, BS; Megham Twiss, MA; Latassa Love, BA; Modupeola Arojoye, BA; Vineet Arora, MD; Christine Babcock, MD

**Institution(s):** University of Chicago; UChicago Medicine

**Abstract Type:** Research-focused

**Background**

Physician shortages in underserved communities is a global issue that affects access to health care services. While the location of graduate medical education (GME) training does influence location of practice, recruiting residency physicians to serve health professional shortage areas could be challenging. One possible way to encourage residents to serve a surrounding community with a health professional shortage is to introduce structured community engagement within the residency. While many GME programs may engage residents in structured community engagement, few have been evaluated with respect to intention to serve the surrounding community.

**Objectives**

To investigate the relationship between graduate medical trainees' involvement in a structured community engagement program during training (GME Community Champions (CC) Program) and their interest in working with underserved communities and the intention to practice on the southside of Chicago, a health professions shortage area, after post-graduate training.

**Methods**

This cross-sectional, single-center survey study conducted in 2023 included all residents and fellows at UChicago Medicine. All residents and fellows were invited to apply to the CC program which includes year-long health equity education and community engagement opportunities through the hospital's community engagement arm. One year later, all residents and fellows were also asked via survey regarding their participation in community engagement during medical school, and their level of interest in working with underserved populations and on remaining in practice on the southside of Chicago after training. High interest was defined as the top quintile response of 8-10 on a 10-point scale. Multivariable logistic regression models tested the association between participation in the CC program on outcomes (high interest in working with underserved, remaining in practice on southside Chicago), controlling for demographic and prior experience in community engagement.

**Results/Outcomes/Improvements**

Of the 1022 residents and fellows surveyed in 2023, 476 (47%) responded. 85% (393/463) reported participation in community engagement prior to residency. 52% (237/460) had high interest in working with underserved populations after training and 21% (95/460) had high interest in remaining on southside Chicago. Of this sample, 5% (24/476) were selected to participate in Community Champions. In multivariable logistic regression controlling for age, gender, residency year, program type, and prior participation in community engagement, participants in the Community Champions Program were over seven times more likely to express high interest in serving the underserved compared to those who did not participate during training (OR 7.27, 95% CI = 2.22 – 23.83,  $p = 0.001$ ). Participants were also found to be four times more likely to express high interest in working on the southside of Chicago after

training compared to those who did not participate (OR 4.31, 95% CI = 1.59 – 11.69, p = 0.004).

**Significance/Implications/Relevance**

This finding suggests that participation in a structured community engagement program (CC program) may be associated with resident and fellows augmenting interest working in underserved communities after post-graduate training and interest in staying to serve local communities with health professional shortages. Community engagement programs during graduate medical training are a way that should be piloted to improve physician shortages in underserved communities.



## **Poster #6: Embedding a Community Bus Tour During Intern Orientation Can Result in Awareness of Community Health Needs**

**Author(s):** Edwin McDonald, MD; Jeremy Podczerwinski, BS; Stephen Estime, MD; Megham Twiss, MA; Latassa Love, BA; Modupeola Arojoye, BA; Vineet Arora, MD; Christine Babcock, MD

**Institution(s):** University of Chicago; UChicago Medicine

**Abstract Type:** Innovation-focused

### **Background**

As of 2024, the ACGME proposes that all trainees receive information about their primary clinical learning environment's community health needs assessment (CHNA) as a core training requirement. To our knowledge, graduate medical education orientations do not utilize CHNAs to increase resident awareness of community health needs. Most methods of education during orientation rely on classroom or module-based training. Prior studies found that community bus tours (CBT) are practical educational tools for highlighting social determinants of health (SDOH) underlying disparities. Leveraging a community bus tour to engage residents in learning about the CHNA could be a novel way to foster residents' understanding of and engagement in CHNA. Thus, we created and implemented a community historian and physician co-led bus tour that combines local history, our CHNA, and SDOH for our incoming post-graduate year one (PGY-1) interns.

### **Objectives**

In this innovation, we aim to implement and evaluate a community bus tour during PGY-1 orientation as a vehicle for promoting knowledge and awareness of our CHNA, the health needs of our service area's neighborhoods, and institutional history, context, and strategy.

### **Methods**

Incoming PGY-1 residents to the University of Chicago Medicine (UCM), an urban academic center, participated in a community bus tour within the University's 12-zip code service area as part of orientation in June 2024. UChicago GME co-created the tour with Shermann Thomas, a Chicago historian. The tour emphasized the historical events relevant to the South Side of Chicago. Details from our 2022 CHNA shared on the tour included our service area demographics, community health priorities, and UCM's community health implementation strategy. We created and deployed a pre-post activity questionnaire to evaluate the tour using five-point Likert-type scales and open-ended responses completed immediately or within two weeks after the bus tour. Statistical analysis of ordinal data utilized the Wilcoxon signed-rank test. Open-ended answers were analyzed to identify themes that mapped to our objectives. All residents were asked, "How will the tour impact your practice?"

### **Results/Outcomes/Improvements**

Of 147 interns, 143 participated in the bus tour (97%). Eighty of 143 interns completed the surveys (56%). Before the tour, residents were only slightly confident with their understanding of the present-day impact of the history of the South Side and both UCM's health priorities and engagement on the Southside. Median post-bus tour Likert scores demonstrated significant improvements in confidence in understanding the impact of history on current residents, the health needs of the neighborhoods in the tour, racial/ethnic disparities in health outcomes in Chicago, UCM's health priorities based on the CHNA, and UCM's engagement with the South Side of Chicago ( $p$  values  $<0.001$ ). Analysis of "How will the tour impact your practice?"

generated several themes, including an improved understanding how a patient's social context can impact clinical interactions and outcomes.

**Significance/Implications/Relevance**

Embedding a community bus tour during orientation co-led by a local historian and a physician with exposure to CHNA resulted in increased awareness of community health needs, SDOH, and institutional community engagement. Given the new ACGME proposal, this is a novel approach to engaging residents early through active learning about CHNA.

**Poster #7: Teaching Residents to Manage Blood Wisely to Prevent Hospital-Acquired Anemia.**

**Author(s):** Ekaterina Vypritskaya, MD; Mesrop Aleksanyan, MD; Irene Pokua, MD; Claudia Villa Celi, MD; Bushra Ghafoor, MD

**Institution(s):** Capital Health

**Abstract Type:** Innovation-focused

**Background**

Hospital-acquired anemia (HAA) is a common, yet under-recognized issue in hospital medicine. While diagnostic blood testing is crucial, residents might not realize that unnecessary orders can lead to wasted resources and deplete patient blood, leading to symptomatic anemia, longer hospital stays, and increased transfusions. HAA is especially challenging in cardiac patients due to its multifactorial causes including bone marrow suppression, blood loss from medications, hemolysis, and impaired erythropoiesis. Despite its importance, research on HAA in cardiac telemetry is limited. Understanding its prevalence and risk factors is key to better prevention and management.

**Objectives**

1. Analyze the prevalence of HAA in patients admitted to a telemetry unit.
2. Investigate the association between HAA and common comorbidities such as atrial fibrillation, congestive heart failure, and chronic kidney disease.
3. Raise awareness among medical residents about HAA, as a preventable condition that can lead to significant complications and potentially avoidable blood transfusions.
4. Educate residents on preventive measures and management of HAA.

**Methods**

We conducted a retrospective observational study through chart analysis of patients admitted to the cardiac telemetry unit between June 1 and December 31, 2023. Our aim was to analyze the prevalence of HAA from admission to hospital day five and its associations with atrial fibrillation, congestive heart failure, and chronic kidney disease. Before the interventions, we surveyed residents to assess their awareness of hospital-acquired anemia, serving as a baseline assessment. Tailored educational sessions were provided to residents, hospitalists, and nurses, focusing on the prevention and management of HAA. A post-intervention survey evaluated changes in knowledge and awareness following these sessions. In addition, a creative and informative poster was displayed in the cardiac telemetry unit as a visual reminder of anemia prevention measures for both residents and nurses.

**Results/Outcomes/Improvements**

The prevalence of HAA, from admission to hospital day 5, was found to be 50%. Analysis showed a significant association between HAA and atrial fibrillation, (odds ratio 0.46). However, no significant associations were found with congestive heart failure or chronic kidney disease. Potential limitations include the retrospective nature of the study and its single-unit design. Future research should address these limitations through prospective, multi-unit studies to validate our findings and explore factors contributing to HAA development in diverse patient populations. The pre- and post-educational surveys revealed a significant improvement in

resident's awareness of HAA following the educational interventions. This project also fostered the development of an educational collaboration with nursing.

### **Significance/Implications/Relevance**

Our study highlights the high prevalence of HAA, a clinically significant and potentially preventable hospital associated condition. By focusing on patients admitted to a cardiac telemetry unit, we provided valuable insights into HAA in this specific clinical setting. The observed association between HAA and atrial fibrillation suggests the need for further research into the underlying mechanisms and potential treatments. Our pre- and post-interventional surveys confirm that targeted educational sessions significantly improved residents' knowledge of HAA prevention and management. Enhancing awareness and optimization blood management practices can help reduce the impact of HAA on patient outcomes. Further research should explore interventions aimed at decreasing HAA prevalence and its complications in this patient population.

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## **Poster #8: Changes in Medical School Conflict of Interest Policies from 2014 to 2023**

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**Institution(s):** Yale School of Medicine; Duke University School of Medicine; University of Michigan Medical School; Chicago Medical School at Rosalind Franklin University; Pacific Northwest University of Health Sciences; Oklahoma State University Center for Health Sciences; Division of General Internal Medicine, University of Pittsburgh

**Abstract Type:** Research-focused

### **Background**

Financial relationships between industry and clinicians manifest early and consistently in medical education(1): researchers have noted correlations between resident interaction with pharmaceutical representatives and changes in prescribing habits.(2) These ties to the pharmaceutical industry play a significant role in steering medical practices, prompting a closer look at the ties between industry partners and medical schools. The American Medical Student Association (AMSA) uses national, consensus standards to develop a grading methodology for medical school conflict of interest (COI) policies and has periodically released evaluations of medical school COI policies, referred to as AMSA PharmFree Scorecards. Much has changed in medicine since 2014 when the last AMSA Scorecard was published. This study sought to evaluate the COI policies of 30 prestigious medical schools using similar methodology as previous Scorecard iterations.(3)

### **Objectives**

To evaluate conflict of interest (COI) policies at medical schools in 2023 and changes in policies compared to 2014. Policies were analyzed according to 15 domains: industry-funded gifts, industry-funded meals, industry-funded speaking relationships, industry-support of ACCME-accredited CME, attendance of industry-sponsored promotional events, industry-funded scholarships and awards, ghostwriting, consulting and advising relationships, access of pharmaceutical sales representatives, access of medical device representatives, COI disclosure, existence of an adequate COI curriculum, extension of COI funding policies to community affiliates, enforcement and sanctions of policies, and medical school financial relationships with industry.

### **Methods**

We conducted a cross-sectional analysis of conflict of interest policies of the top 30 medical schools in the US, as reported in the 2022 iteration of US News and World Report “Best Medical Schools: Research” list.(3) A standardized survey was sent to the Dean of Curriculum (or equivalent role) at each of the top 30 medical schools, requesting copies of COI policies (with an online submission portal as well). For schools that did not complete the survey, manual data collection using publicly available policies took place. Policies were graded using a similar rubric to the previous Scorecard, both of which adapt consensus recommendations published by the AAMC and other professional organizations.(4) Policies in each domain were assigned a score ranging from 1 point for inadequate policies, 2 points for moderate policies, and 3 points for model policies. Total scores were then calculated for each medical school, assigned a letter grade (A, B, C, I/F), and compared with 2014 scores.

### **Results/Outcomes/Improvements**

Eleven of thirty medical schools submitted COI policies and the remainder were analyzed based

on publicly available information. No school received an “A” grade, 22 (73%) schools received a “B,” 6 (20%) schools received a “C,” and 2 (7%) schools received an “I/F.” The majority of schools had model policies around COI enforcement (97%), gift acceptance (83%), and ghostwriting (80%). Conversely, no schools had exemplar policies in regulating industry payments to continuing medical education (CME) or limiting direct payments to faculty. When comparing 2014 and 2023 Scorecards over the consistent 14 domains analyzed, total domain scores decreased from 32.70 to 31.70 ( $p = 0.14$ ); 14 (46.7%) of schools had a decrease in total score, 11 (36.7%) of schools had an increase, and 5 (16.7%) of schools had no change. Faculty at every school accepted industry payments, including 16.7% of deans and 19.3% of clerkship directors.

### **Significance/Implications/Relevance**

The 2023 PharmFree Scorecard paints a picture of middling conflict of interest policies nationwide at top medical schools and little change in the past decade. While schools scored well in some domains, such as the prohibition of industry gifts and ghostwriting, schools generally had inadequate policies. Notably, more schools saw their average score drop from the previous Scorecard, in part due to the additional analysis of industry payments to medical school leadership. These results highlight the concerning financial ties between industry and medical schools and underline the overall need for more stringent policies and enforcement. While the majority of faculty did not receive industry funding, low scores in this new domain underscore the pervasive nature of potential conflicts and the need for comprehensive policy reforms. To address these potential conflicts, it is imperative for medical schools to adopt and enforce regulations that align with national recommendations.(5,6)

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## **Poster #9: Evaluating AI-Powered Virtual Patients Simulations in Medical Education: A 12-Month Study**

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**Institution(s):** Southern Illinois University School of Medicine; Southern Illinois University Carbondale

**Abstract Type:** Research-focused

### **Background**

Problem-based learning (PBL) is widely adopted in US medical schools and residency programs to impart pre-clinical and clinical knowledge, develop clinical reasoning, and refine interpersonal skills through simulated patient cases. Current methods, including multimedia databases and standardized patients, face challenges such as inconsistent quality, limited repeatability, inadequate personalized feedback, and restricted patient diversity. To address these limitations, we developed an AI-powered PBL platform that generates realistic patient encounters, offering diverse and repeatable cases while enhancing student engagement, skill development, and interpersonal competencies.

### **Objectives**

This study aimed to assess the impact of generative AI-simulated patient exercises on medical student learning and future applications for residency programs, by comparing interactions between a traditional multimedia database model (ePBLM) and a novel 3D-animated, AI-enabled avatar. We developed a standardized codebook of behaviors to interpret student interactions across different PBL modes, applicable to both this study and future research. Using descriptive ethnographic observation techniques, we ensured consistent comparison by employing an identical patient case (Randy Rhodes, an undiagnosed type II diabetic) for both formats. This comprehensive approach allowed us to evaluate the effectiveness of AI-simulated patient exercises in medical education, providing insights into how these advanced technologies might enhance student learning experiences and better prepare future healthcare professionals for real-world clinical scenarios.

### **Methods**

**Study Design:** Setting: 2024, US allopathic medical school with established ePBLM curriculum. **Participants:** 26 medical students divided into four PBL groups (6-8 students each). **Format:** Two groups assigned to ePBLM, two to AI PBLM. **Case:** Simulated Type II Diabetic patient. **Task:** History gathering, diagnosis, and care plan development.

**Procedure:** 1) Students completed assigned PBL format. 2) Research team identified key behaviors across groups. 3) Created a codebook of 47 discrete behaviors (e.g., use of open versus closed-ended questioning. 4) Quantified incidence of each behavior per group and experimental condition. 5) Conducted blinded behavioral coding to reduce bias. 6) Refined codebook to minimize ambiguity.

**Analysis:** Compared frequency of behaviors between ePBLM and AI PBLM groups.

**Results/Outcomes/Improvements**

The AI PBLM format showed significant improvements over traditional ePBLM, enhancing patient interactions and learning experiences. Key differences included increased personalization, with more frequent use of the patient's name and gendered pronouns, as well as higher instances of peer support and collaborative problem-solving. Unique behaviors in AI PBLM included the use of open-ended questions, self-introductions and team introductions, clear communication of treatment plans, and addressing patient concerns about care recommendations. These features contributed to more realistic and engaging patient interactions, ultimately creating a more effective learning environment for medical students. The AI PBLM approach demonstrated its potential to better prepare learners for real-world clinical scenarios by simulating more authentic patient encounters and encouraging more comprehensive care strategies.

**Significance/Implications/Relevance**

AI PBLM revitalizes problem-based learning by creating opportunities for realistic patient interactions and enabling practice of crucial skills like open-ended questioning, care plan communication, and empathetic responses. It enhances clinical preparation through interactions that more closely mirror real-world encounters, increased patient personalization, and greater utilization of interpersonal skills. The study also contributes methodologically by establishing a framework for quantifying student interactions in PBL contexts and exploring the possibility of unique specialty dependent codebooks. Despite limitations due to small sample size, the research demonstrates the potential of generative AI to significantly improve medical education through more engaging and realistic problem-based learning experiences. Future directions include larger sample sizes, updated AI models, and a greater variety of simulated patients, potentially better preparing students for future clinical practice.

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## **Poster #10: Bridging the AI Gap in Health Care: An Innovative Approach to Educating Medical Professionals on Generative AI**

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**Institution(s):** University of Arkansas for Medical Sciences; University of Arkansas for Medical Sciences, Arkansas Children's Hospital

**Abstract Type:** Innovation-focused

### **Background**

As artificial intelligence (AI) continues to transform health care, there is a growing need for medical professionals to understand and effectively utilize these technologies. However, a significant knowledge gap exists between technological advancements and health care workers' familiarity with AI tools.

### **Objectives**

This study aimed to assess the impact of innovative, tailored educational interventions on health care professionals' perceptions, understanding, and willingness to adopt generative AI technologies across various medical specialties.

### **Methods**

We conducted a series of educational sessions, including grand rounds and conference presentations, for diverse healthcare audiences at Arkansas Children's Hospital and the Arkansas Chapter of the American Academy of Pediatrics. The sessions employed creative elements such as short-form videos and animated hand drawings to make the content relatable. Each presentation included specialty-specific use cases and interactive demonstrations. Pre- and post-intervention surveys measured comfort levels, understanding, and perceived usefulness of AI across various health care domains.

### **Results/Outcomes/Improvements**

A total of 85 participants completed the pre-survey, and 77 completed the post-survey. Comfort with using generative AI increased by 41.7% (95% CI: 28.9%-54.5%), from a mean of 2.11 (95% CI: 1.87-2.35) to 2.99 (95% CI: 2.72-3.26) on a 5-point scale. Understanding of generative AI improved by 57.2% (95% CI: 43.7%-70.7%), from a mean of 2.15 (95% CI: 1.90-2.40) to 3.38 (95% CI: 3.11-3.65). Willingness to use AI in health care domains also increased: Scholarly Work rose by 16.2% (from 68.2% to 84.4%), Clinical Work by 17.9% (from 60.0% to 77.9%), and Administrative Tasks by 14.7% (from 78.8% to 93.5%). Skepticism towards AI decreased, with an 8.9% reduction in Clinical Work Strongly Disagree/Disagree responses, and a 4.6% drop in Scholarly Work. Agreement that healthcare organizations should implement formal systems for safe AI use increased by 6.8% (95% CI: 2.1%-11.5%), from 4.52 to 4.83. Qualitative feedback highlighted ethical concerns, HIPAA compliance, and AI's limitations.

### **Significance/Implications/Relevance**

This study demonstrates that targeted, creatively designed educational interventions can significantly improve health care professionals' comfort with and understanding of AI technologies. The approach's effectiveness across various specialties suggests a scalable model for AI literacy in health care. These findings have important implications for graduate medical education programs, highlighting the need for innovative AI curricula to prepare health care professionals for an AI-integrated landscape. Future steps include advanced sessions to

increase proficiency and hands-on practice with AI tools, as well as applying this educational model to other emerging technologies in health care.

## Poster #11: Breathing Life into the Clinician Educator Milestones

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**Institution(s):** John A Burns School of Medicine

**Abstract Type:** Innovation-focused

### Background

The ACGME published Clinician Educator Milestones (CEM) in August 2022 (1) as a tool developed with experts to help teaching faculty self-assess and strive for growth to reach their full potential as educators (2). The CEM describes levels of competence across five domains with 20 sub-competencies for faculty educators, including educational theory and practice, bias mitigation, wellness, professionalism, diversity, equity and inclusion, and administration. Examples and resources for self-development within each of the CEM sub-competencies and Milestones are published as part of this tool (3). Despite the readily available resources, faculty demonstrated minimal awareness of these tools when discussed at a statewide CEM-focused medical education leaders' conference in April 2023 (4). We determined additional measures would be required to increase familiarity and utilization.

### Objectives

This project seeks to increase faculty awareness and engagement of the CEM. Specific objectives are to:

1) Determine the baseline level of CEM awareness of our GME teaching faculty. 2) Identify the top five individual CEMs rated as the highest priority by our institution's faculty and design future faculty development sessions in those areas.

### Methods

IRB exemption was obtained. Three team members (JDR, SR, HO) presented the ACGME CEM to each clinical department across our institution using a standardized slide deck. Prior knowledge of CEM was elicited during facilitated discussions and a post-session survey of each department's faculty. Department staff were emailed a link to the slides and survey with up to three reminders sent to encourage completion. The post-session survey asked faculty to select five CEM they felt supported their needs and interests for personal faculty development.

### Results/Outcomes/Improvements

Eight clinical departments, and our affiliated Cancer Center, received the standardized CEM presentation intervention over eight months between January and August 2024. The completion rate of the optional post-session survey was 35% (56/159), indicating that only 39% (22/56) of respondents were previously aware of the CEM. The five most desired CEMs chosen for self-improvement are listed below with their total number of votes:

1. ETP1 - Teaching and Facilitating Learning (29)
2. ETP3 - Learner Assessment (22)
3. ETP5 - Performance Improvement and Remediation (22)

## 4. ETP4 - Feedback (20)

## 5. ADMIN2 Leadership Skills (18)

Qualitative observations indicated faculty wariness that the CEM could become a required expectation in the future, increasing the workload.

### **Significance/Implications/Relevance**

Our group identified a feasible approach for mass FD to increase awareness of the CEM. Findings were consistent with our hypothesis that many faculty were previously unaware of the CEM as a tool for personal development. Other than leadership skills, four of five competencies prioritized by faculty fell in the ETP competency area, which may suggest that the majority of respondents prioritize clinical teaching development over other areas such as scholarly productivity. These findings inform our next steps to create offerings in alignment with the prioritized milestones to increase future engagement in FD. Helpful lessons that can be shared nationally include identifying the common faculty concern for increased non-clinical work; in the setting of a collective faculty desire for self-improvement. Future offerings will be developed focusing on four of the top five chosen CEM (as an institutional faculty development feedback module has already been created).

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## **Poster #12: Overcoming Obstacles: Ensuring Long-Lasting Success in Direct Observation Evaluations**

**Author(s):** Joel Rayl, MD; Katherine Tatar, MD; Bradley Moore, MD

**Institution(s):** Summa Health System/NEOMED, Akron, Ohio

**Abstract Type:** Innovation-focused

### **Background**

Dedication to competency-based medical education (CBME) requires an evaluation system that incorporates numerous actionable evaluations founded primarily on direct observations and workplace-based assessments (1). In 2019, our program shifted from utilizing an industry standard evaluation software to a widely available survey tool with branched survey logic to quickly assess only the entrustable professional activities (EPAs) that were actually observed proximate to any given observation. Despite our 50% increase in completed direct observation evaluations, our program was challenged at a national meeting to show sustainable results with longitudinal data. We thus conducted a faculty needs assessment that identified disparities in completion rates between core faculty- and non-core faculty-led rotations resulting from four key barriers.

### **Objectives**

Our primary objective was to pair our quick and actionable EPA-based evaluations to a sustainable, low cost, high volume survey software tool to increase the percent of residents with at least one documented rotation-specific evaluation every month, while maintaining our dedication to direct observation evaluations.

### **Methods**

We conducted a faculty needs assessment that identified disparities in completion rates between core faculty- and non-core faculty-led rotations resulting from four key barriers: the requirement to enter multiple demographic data points (e.g., resident name, rotation name, evaluator email address, and month) on each evaluation, the lack of resident photos to help with evaluator recall, accessibility issues due to firewall restrictions, and the absence of automated reminder emails. In March 2022, we adopted a low-cost survey tool that addressed all these barriers while keeping our branched logic evaluations. After this change, we tracked data from April 2022 to May 2024 to assess the impact on the percentage of completed monthly rotation-specific evaluations for our residents. We used descriptive statistics to compare our results to those data from April 2021 to February 2022.

### **Results/Outcomes/Improvements**

From April 2021 to February 2022, there were an average of 67 direct observation evaluations completed per month for the combined 75 residents in our categorical medicine, transitional year, and preliminary year training programs. Of these 75 residents, an average of 32 residents (42.7%) had at least one rotation-specific evaluation completed per month. When reviewing our evaluations from April 2022 to May 2024, there were an average of 153 direct observation evaluations completed each month (a 127% increase) for the 75 residents in our training programs. Even more importantly, from April 2022 to May 2024 we had an average of 67 residents (88.9%) with at least one rotation-specific evaluation completed each month. This reflected both a 108.3% increase ( $p < 0.01$ ) in the overall percent of residents with at least one rotation-specific evaluation completed each month and demonstrated a durable direct observation response rate over a period of more than two years.

**Significance/Implications/Relevance**

Direct observations and workplace-based assessments have been proven to enhance residents' learning of essential skills, support programs in making justifiable entrustment decisions through CBME, foster deliberate practice among learners, and ensure supervision for safe patient care (1). In 2019, incorporating branched logic-based evaluations led to an increased number of direct observation evaluations, but our program struggled to see this increase across all our non-core faculty-led rotations. After addressing key barriers, we showed that a branched logic-based evaluation system durably increased completion rates for direct observation evaluations across all rotations at our institution. This increased data has been critical to guide our learners through our own CBME training environment.

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## **Poster #13: A Dedicated Communication Coaching Program for Internal Medicine Residents**

**Author(s):** Andrea Garroway, PhD; Amy Blatt, MD; Alec O'Connor, MD, MPH

**Institution(s):** University of Rochester

**Abstract Type:** Innovation-focused

### **Background**

Communication is a critical core competency in medical education (1-3). Clinical encounters with these components (build a relationship, gather information, etc.) are associated with improved patient satisfaction and health outcomes (4-9), lower costs (10), and reduced risk of malpractice claims (11). While direct observation with feedback is the gold-standard in medical education (12), observing/assessing communication skills in clinical practice occurs infrequently (13-14), due to busy clinical work and many clinical teachers' greater comfort giving feedback in patient care and medical knowledge areas (15). Trainees value being observed interviewing (16), as real-world patient interactions are vital for trainee skill-development and confidence (17). In 2011, University of Rochester Medical Center began a program to improve faculty physicians' communication through direct observation and feedback from internal "communication coaches" (18). The program received enthusiastic institutional support to expand into GME.

### **Objectives**

The goals of this project were to:

- 1) Assess the feasibility of implementing a communication coaching program for all residents within an internal medicine residency program.
- 2) Assess residents' perception of the usefulness of the communication coaching program for their training and professional development.

### **Methods**

In 2017, an internal medicine residency program hired a faculty psychologist, now Assistant Program Director for Communication Coaching and Wellness, to launch a communication coaching program within the residency with 0.6 FTE. The coach observes each resident in continuity clinic and inpatient settings—once during intern year and once during R2 or R3 year. Each coaching session includes: 1) goal-setting between coach and resident; 2) direct observation of four hours of clinical practice, coding communication behaviors with the Calgary-Cambridge Patient-Centered Observation checklist; 3) a report detailing strengths and personalized recommendations; and 4) an hour-long feedback meeting to review the report, resident responses, and next steps. Feedback meetings often discuss professional identity formation, personal growth, and well-being impacts on communication and work satisfaction. An anonymous evaluation is emailed post-coaching to assess coaching perceived helpfulness.

### **Results/Outcomes/Improvements**

Since 2017, the program has coached 185 internal medicine residents. Before 2022, 100% of survey completers (n = 64) found the feedback on patient-and-family-centered care helpful or very helpful. In 2022, we refined the evaluation for more detailed feedback. Of the updated respondents (n = 23), 91% found written feedback on patient communication and the debrief/verbal feedback extremely or very helpful, and 90% found written feedback on team,

leadership, or mentorship skills extremely or very helpful.

Since 2022, eight residents (35%) chose to add narrative comments to their evaluation. All comments were positive, noting appreciation for the helpful feedback. Three narrative comments volunteered that coaching improved their clinical practice. One example comment:

“This program is incredibly valuable. As a first gen clinician, this program unveils the hidden curriculum as to how clinicians stay on top of their schedule while keeping enough control to maintain their empathy and effectiveness.”

### **Significance/Implications/Relevance**

This coaching program provides standardized assessment and feedback based on direct observation of residents' communication with their patients and teams, supporting the development of key communication and professionalism skills that map onto ACGME milestones in the domains of Interpersonal and Communication skills (communication with patients, families, and teams) and Professionalism (self-awareness and help-seeking behavior, professional behavior). Resident quantitative and qualitative feedback has been very positive about the usefulness of this program to them.

This communication program has already expanded to several residency programs at our medical center. We are currently assessing the utility of the communication coaching program across multiple residency programs and measuring differences between those programs that have and don't have a dedicated communication coach.

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## **Poster #14: Effectiveness of Team-Based Learning in Psychiatry Residency Education**

**Author(s):** Joshua Robak, MD; Danielle Dilsaver, MS; Jyotsna Ranga, MBBS; Sara Bharwani, EdD

**Institution(s):** Creighton University

**Abstract Type:** Research-focused

### **Background**

A Common Program Requirement determined by the ACGME is that “residents must be provided with protected time to participate in core didactic activities.” Programs also utilize specialty-specific “in-training examinations” (ITE) to assess resident competency. Graduate medical education (GME) has traditionally used a lecture-based curriculum, but active learning methods like team-based learning (TBL) are increasingly utilized. Of the existing literature, most studies have examined the feasibility of implementing TBL in GME and subjective measures (1-5). A few positive studies have assessed the efficacy of TBL for objective measures (6,7), but none to our knowledge have involved psychiatry GME. Given TBL’s emphasis on learner preparation outside the classroom paired with the significant clinical responsibilities of resident physicians, it begs the question: Is TBL effective for knowledge acquisition in psychiatry GME?

### **Objectives**

To determine if transition from a lecture-based curriculum to TBL resulted in a change in Psychiatric Residents In-Training Examination (PRITE) scores.

### **Methods**

PRITE total score and global scores within a general psychiatry residency program were collected from 2018-2023 following a program’s transition from lecture-based curriculum to TBL in July 2021. Because residents sit for the PRITE yearly in October, they could provide multiple PRITE scores during the study period. Type of medical school attended (MD versus DO), gender, and Step 3 pass/fail on first attempt were also collected. To evaluate yearly changes in PRITE scores, regression models were estimated. A random intercept was estimated to account for the correlation of PRITE scores from the same resident with adjustment for residents’ pass/fail of Step 3 on their first attempt. PRITE scores from 2020 were excluded from the results due to a deviation in the testing format during the COVID-19 pandemic.

### **Results/Outcomes/Improvements**

The analysis included 73 unique residents with 35 residents in lecture-based curriculum only, 20 residents in TBL only, and 18 residents that received both types of curricula. Of the 145 total PRITE scores, 73 were in the lecture cohort and 72 were in the TBL cohort. PRITE scores significantly increased in the TBL group for total score ( $p < 0.001$ ), clinical psychiatry global score ( $p < 0.001$ ), clinical neurology global score ( $p = 0.008$ ), and clinical neurosciences global score ( $p = 0.006$ ). The study period included 41 males (56.16%) and 32 females (43.84%). 59 residents graduated from MD medical schools (83.10%) and 12 residents from DO medical schools (16.90%). 65 of the residents passed USMLE/COMLEX Step 3 on their first attempt (92.86%).

### **Significance/Implications/Relevance**

A general psychiatry residency’s transition from lecture-based curriculum to TBL was associated with an improvement in all three PRITE global scores and PRITE total score. The ACGME aims to “educate physicians who seek and achieve board certification” and therefore, the ACGME

assesses programs based on board certification pass rate (8). As a result, many programs utilize specialty-specific ITE to assess resident competency and readiness for board examinations. Studies suggest there is a correlation between ITE performance and subsequent board examination performance in multiple specialties, including general psychiatry (9-10). Following implementation of TBL in an internal medicine and obstetrics and gynecology residency program, two prior studies also found similar improvements in ITE scores (6,7). Our findings suggest TBL is an effective didactic curriculum in psychiatry GME and enhance its evidence of generalizability to GME programs in other medical specialties.

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## **Poster #15: LGBTQ+ Health Content in United States Residency Curricula: A Scoping Review**

**Author(s):** Elaine Hsiang, MD; Carolina Ornelas-Dorian, MD, MPH; Margaret Lin-Martore, MD; Joel Moll, MD

**Institution(s):** Stanford University; UCSF; Virginia Commonwealth University

**Abstract Type:** Research-focused

### **Background**

Individuals that identify as lesbian, gay, bisexual, transgender, queer, and other sexual and gender minorities (LGBTQ+) make up a growing proportion of the United States population: 8% of those surveyed by the 2021 United States Census self-identified as LGBTQ+, and nearly 25% of those respondents were young adults. LGBTQ+ people experience several health and health care disparities that extend beyond issues directly related to sexual or gender identity. The care of LGBTQ+ populations is heavily influenced by clinician training, but the landscape of LGBTQ+ health teaching in graduate medical education (GME) is poorly understood and often siloed by specialty. The amount of curricular or clinical teaching, teaching modalities, and topics covered across various specialties remain unclear, and there is a dearth of published curricular resources and models for LGBTQ+ health education designed for resident learners.

### **Objectives**

To clarify the current state of LGBTQ+ health teaching in graduate medical education, and to identify trends and opportunities to improve education in LGBTQ+ health, by synthesizing educational content across specialties.

### **Methods**

In February 2024, the authors performed a scoping review of the literature across six databases (Embase, ERIC, Google Scholar, LGBTQ Life, MedEdPortal, PubMed). A scoping review approach was utilized due to the inherent variability across residency specialties. Two authors extracted data on the amount, scope, and modality of LGBTQ+ didactic and clinical teaching across residencies, as well as educational interventions designed for resident learners. The authors performed thematic analysis to synthesize and present the data.

### **Results/Outcomes/Improvements**

Fifty-three articles met inclusion criteria. In the past decade, the number of specialties with data on LGBTQ+ health teaching in residency increased from four to 12: dermatology, emergency medicine, family medicine, internal medicine, internal medicine-pediatrics, obstetrics and gynecology, oral and maxillofacial surgery, otolaryngology, pediatrics, plastic surgery, psychiatry, and urology. Curricular hours and topics covered were highly variable across and within specialties. Program director attitudes, region of training, and presence of LGBTQ+ faculty were associated with LGBTQ+ curricular inclusion. Surgical specialties appeared to lag medical specialties in amount and breadth of teaching, but had a stronger focus on gender affirming surgical care. There was consensus on the need for more clinical exposure across specialties. Educational interventions analyzed had variable lengths, topics, and teaching modalities, and included specialties not previously surveyed on teaching LGBTQ+ health.

### **Significance/Implications/Relevance**

The variability and lack of consistency in the amount and scope of LGBTQ+ health teaching and persistent gaps in LGBTQ+ inclusion across specialties necessitate the urgent standardization

of LGBTQ+ health education. Our findings provide a novel, contemporary review of LGBTQ+ health teaching specific to GME and highlight practical next steps in addressing LGBTQ+ health disparities from an education standpoint. Encouraging the use of centralized resources developed by or in conjunction with LGBTQ+ national health organizations, specialty organizations, and the ACGME may lower barriers to accessing and administering LGBTQ+ health content across specialties while encouraging universal adoption.

## **Poster #16: Representation of American Indian and Alaska Native Trainees in Medical School and Residency: A Long Way to Go**

**Author(s):** Brooke Warren, MD; Emma Grellinger, BS; Dixie Blumenshine, BS; Kyle Lakatos, MD, MPP, MS; Tasce Bongiovanni, MD, MPP

**Institution(s):** Stanford Health Care; University of California San Francisco School of Medicine; Kaiser Permanente, Oakland; University of California, San Francisco, Department of Surgery

**Abstract Type:** Innovation-focused

### **Background**

American Indian and Alaska Native (AI/AN) individuals face higher morbidity and mortality outcomes than the general United States population. Existing data has shown that culturally concordant care improves outcomes for minoritized patients (1). Thus, understanding current gaps in AI/AN representation is imperative to increasing AI/AN representation in medicine and improving healthcare for AI/AN communities.

### **Objectives**

The objective of this study is to determine trends in AI/AN representation in application and matriculation to medical school and in residency over the last two decades. We also aim to determine trends in representation across 20 residency specialties.

### **Methods**

We performed a cross-sectional analysis to determine the representation of American Indian and Alaska Native (AI/AN) allopathic medical school applicants, matriculants, and resident physicians relative to the US population. We used publicly available data from the Association of American Medical Colleges and ACGME between 2005 and 2022 to report the number of medical school applicants and matriculants, residents by specialty, and total residents. We then calculated representation quotients (RQs) which report the proportion of AI/ANs in a given group (medical school applicants, matriculants, and residents) compared to the proportion of AI/ANs in the total US population. Regression analyses were used to describe trends in total number of AI/ANs and RQs of AI/ANs over time. Significance was set at  $p < 0.05$ .

### **Results/Outcomes/Improvements**

Between 2005-2022, there has been a persistent underrepresentation of AI/AN physician trainees. The average RQ for allopathic medical school applicants, matriculants, and resident physicians was 0.59, 0.57, and 0.23, respectively. Of note, an RQ of 1.0 would represent a proportional representation of AI/AN medical trainees compared to the US AI/AN population. Throughout the study period, there was a significant downward trend in the RQ of AI/AN applicants, matriculants, and residents ( $p < 0.05$ ). When specialties were analyzed individually, there was a significant decrease in the RQ of AI/AN residents in 11 of the 20 specialties analyzed. AI/AN trainees were most represented in family medicine (RQ = 0.47), general surgery (RQ = 0.33), and obstetrics and gynecology (RQ = 0.32), though this representation is still far below what would be expected proportionally.

### **Significance/Implications/Relevance**

AI/AN trainees are severely underrepresented at both the medical school and residency levels. Alarming, the results indicate that this disparity has gotten worse over the last two decades. Given poor representation of AI/AN medical school applications, barriers to AI/AN representation in medicine begin at or before application to medical school and exist through

residency. Importantly, attaining AI/AN RQs of 1.0 would equate to a statistically proportional representation of AI/AN trainees; however, in the context of the longstanding historical gaps of AI/AN representation in medicine, higher RQs should be targeted. There must be institutional support for medical trainees and resident physicians across specialties throughout medical training to retain future AI/AN physician trainees. Intervention is also necessary early in the academic pathway, encouraging AI/AN pre-medical students and youth to pursue medicine.

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## **Poster #17: Emotional Intelligence Workshop as a Preventative Approach to Reduce Resident Burnout: Improving Self-Awareness, Self-Regulation, and Motivation**

**Author(s):** Liza Garcia, Bachelors in Social Work

**Institution(s):** Doctors Hospital at Renaissance (DHR)

**Abstract Type:** Innovation-focused

### **Background**

In a recent study, the American Medical Association reports half of physicians experience some form of burnout. These forms include, emotional exhaustion, depersonalization and feelings of decreased personal achievement.(1) While medical education emphasizes cognitive development, such as studying memorizing and test taking, emotional development is often overlooked. (2) Conventional approaches to addressing burnout typically focus on intervention after it has reached a critical stage. Unfortunately, very few approaches have been implemented to prioritize prevention. Workshops conducted on the awareness of emotional intelligence however, offer a potential preventative solution to address burnout before it escalates. This workshop seeks to increase residents awareness of their emotional intelligence by focusing on these three components of self-awareness, self-regulation, and motivation.

### **Objectives**

The workshop aims to equip residents with practical skills to improve their emotional intelligence, particularly in the areas of self-awareness, self-regulation, and motivation. The primary goal is to demonstrate how developing these emotional intelligence competencies can lead to reduced emotional exhaustion, improved stress management, and sustained motivation, ultimately reducing burnout rates and improving patient care.

### **Methods**

A workshop was conducted for residents at DHR Health during orientation week. The workshop focused on the three core elements of emotional intelligence: self-awareness; self-regulation; and motivation. Participants engaged in self-assessment exercises to identify emotional triggers (Enneagram), learned stress management techniques (breathing exercises), and explored strategies to reinforce their sense of purpose in the medical profession (About Me web diagram). Post-session assessments were conducted to measure changes in participants' knowledge, awareness, and changes in their own emotional intelligence.

### **Results/Outcomes/Improvements**

Results of the post session surveys indicated a significant improvement in participants' self-awareness and emotional regulation skills, with 80% of participants reporting more self awareness of reduced stress and emotional burnout. Additionally, 75% of participants noted increased motivation and a reinforced sense of professional purpose. Participants reported feeling more prepared to manage the emotional challenges of their roles.

### **Significance/Implications/Relevance**

This workshop demonstrates the potential of utilizing emotional intelligence as an innovative preventative approach to resident burnout by giving the resident tools to become more aware of their individual emotional management. By improving emotional intelligence skills, residents can better manage stress, maintain motivation, and improve patient care. Implementing these preventative workshops long-term, can also have a significant impact on reducing burnout and improve the overall health care experience for both providers and patients.



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## **Poster #18: Evaluating Methodology for Increasing Diversity in Residency Training: A Scoping Review**

**Author(s):** Lauren Boeckermann, MD, MPH; Dennis Menjivar, BS; Melissa Previtiera, MLIS; Emily Hagn, MD; Hilary McCrary, MD, MPH; Samuel Cheshier, MD, PhD; Jeremiah Alt, MD, PhD

**Institution(s):** University of Utah; University of Cincinnati College of Medicine

**Abstract Type:** Research-focused

### **Background**

Despite increasing awareness, there remains a significant lack of diversity in residency programs across various specialties, resulting in incongruence between patient and physician demographics in medicine.

### **Objectives**

This study aims to review interventions implemented across the medical school to residency pathway that seek to increase the representation of individuals underrepresented in medicine (URiM) through a scoping review of existing literature.

### **Methods**

A scoping literature review from January 2000 to July 2023 evaluated interventions promoting residency diversity within graduate medical education (GME). URiM status was defined by race, ethnicity, and gender status of applicants. All GME residency specialties were included in the review. Studies were excluded if a defined intervention was not taken or if the study was published outside of the United States. Articles were further categorized by the goal(s) of the intervention proposed in the paper - sorting them into five categories: applicant factors, program selection, application screening, interview, and post-interview communications. Recommendations were made based on the evidence found.

### **Results/Outcomes/Improvements**

A full-text review of 257 articles was completed, with 27 eligible articles included. A large majority of the articles included multiple interventions taken simultaneously by a program with a positive effect on increasing URiM within the residency.

### **Significance/Implications/Relevance**

The findings offer valuable insights for healthcare institutions, GME policymakers, and residency programs on effective strategies to promote diversity, equity, and inclusion (DEI) in medical training. Further research is needed to assess the effectiveness of numerous interventions to strengthen efforts to increase DEI in medicine.

## **Poster #19: Developing a Clinician Educator Pathway at a Research-Focused Institution**

**Author(s):** Mary Sizemore, PhD; Orhue Odaro, MD; Diane Bodurka, MD, MHA

**Institution(s):** The University of Texas at MD Anderson Cancer Center

**Abstract Type:** Research-focused

### **Background**

This poster will introduce the journey of creating a clinician educator track in a traditional research-oriented academic institution through faculty engagement and providing resources for ongoing support. To begin, faculty were surveyed to understand the barriers to career advancement and promotion at the institution, and to gauge the need for a clinician educator pathway. Using the data from this survey and the ACGME Milestones as a tool, the Education & Training division at The University of Texas at MD Anderson Cancer Center embarked on an initiative to support clinicians to become better educators. The division supported the adoption of an Educator Portfolio, designed regular faculty education sessions, embedded microlearnings in GME meetings, and invested in interprofessional education training. The capstone to these efforts is the Clinician Educator Certificate, a formal training program created to provide clinicians with skills for education and improving education quality.

### **Objectives**

After reviewing this poster, participants will be able to:

- Identify barriers to clinician educator advancement at research-oriented academic institutions.
- Explain the importance of building and supporting clinician educators.
- Identify resources needed to upskill clinician educators.
- Discuss methods to develop and train clinician educators.

### **Methods**

The survey was titled 'Clinician Educator Pathways for Career Advancement,' and three topics relating to faculty opinions or perceptions was developed: the utility of a clinical educator track, barriers to promotion based on educational effort, and requirements for a successful clinician educator track. The 15-question, anonymous survey was delivered to faculty via email. The survey comprised eight demographic questions; 15, 5-point Likert scale questions on clinician educator perceptions, two on perceived effort, and one on educational barriers. All questions pertained to the current institution, and all clinical, research and tenured faculty were invited to complete the survey. One question set asked respondents to rate seven statements on support, recognition, and promotion of clinician educators. Another set ranked five factors by importance for implementing a clinician education track. A third area offered a free-text option to list barriers to career advancement as clinician educators.

### **Results/Outcomes/Improvements**

There were 213 faculty respondents. Of the sample, 142 respondents (68.3%) were clinical faculty (CFAs), 24% research faculty (RFAs), and 7.7% tenure or term-tenure faculty (TTs). Regardless of academic rank, the majority of faculty did not see a clear path for career advancement as CEs (47.6% vs. 26.2%), nor did they think equal weight was ascribed to educational effort compared to research for recognition (69.9% vs 14.6%) or promotions (64.7%

vs. 13.7%). Most faculty noted the establishment of a Clinician Educator Pathway would aid their career advancement (57.9% vs 15.7%). The single open-ended response question from the survey asked for feedback regarding career advancement barriers the participant faced or was aware of within the institution. Of the 103 respondents, 38 participants (17.84%) provided additional feedback and four major themes emerged. These themes were time, education value, mentorship and professional growth, and institutional culture.

### **Significance/Implications/Relevance**

The survey, conducted at one of America's largest academic cancer centers, revealed low faculty agreement on career advancement for clinician educators (CEs). Open-ended responses highlighted that while faculty value education efforts and career advancement, the current institutional structure lacks incentives for investing in clinical education. These findings underscore the need for institutionally driven changes to support CEs.

While much of the push for a clinical educator path has come from faculty, leadership support for the value of educational work and clear institutional roles will be more impactful. The study also shows that CEs need resources to overcome career advancement barriers. To successfully implement a clinician educator track, the institution should focus on developing promotion criteria, allocating dedicated time for education, and providing structured tools to measure educational efforts.

**Poster #20: Implementation of Individualized Learning Plans Across a Large Midwestern Health Care System Department of Graduate Medical Education**

**Author(s):** Bryce Ringwald, MD; Jennifer Middleton, MD, MPH, FAAFP; Valerie Niedermier, MD

**Institution(s):** OhioHealth Riverside Methodist Hospital Family; OhioHealth; OhioHealth Grant Medical Center

**Abstract Type:** Research-focused

**Background**

Since 2019, the ACGME has required residents to construct individualized learning plans (ILPs). ILPs provide structure for residents to intentionally engage in self-directed and lifelong learning. Although ILPs are required of all trainees, the ACGME has not provided a standardized process for creating and monitoring them. This lack of guidance permits flexibility for program-specific processes regarding ILPs. The literature describes multiple ways that ILPs are performed. Some institutions have paired ILPs with Individualized Learning Assessments (ILA) to match the trainee's ILP with the weaker areas on the ILAs. Some institutions have implemented templated ILPs to make the process simpler for residents. The frequency of review and creation of ILPs varies, ranging from monthly to annually. Variability around the creation, implementation, and utilization of ILPs in graduate medical education (GME) creates ambiguity for program directors.

**Objectives**

This study aims to evaluate the content themes and implementation of ILPs at OhioHealth, an urban midwestern health care system with 41 GME programs across its large network. Additionally, this study aims to assess for differences in ILP content and implementation between diagnostic and procedural specialties.

**Methods**

This study is a cross-sectional survey of resident/fellow advisors and program directors at OhioHealth GME programs designed to describe the content of ILPs and understand the implementation of ILPs. The survey was internally constructed, reviewed, and revised. Surveys were distributed via e-mail to all GME faculty across 41 different residency and fellowship programs. The survey was open for four weeks. Surveys were analyzed using descriptive statistical analysis to assess the proportions of total responses. Categorical data was analyzed for differences between diagnostic and procedural specialties using Pearson's Chi-Square Test of Independence.

**Results/Outcomes/Improvements**

The overall response rate among all faculty was 49.5% (112/226). The most common ACGME Core Competencies included in ILPs were medical knowledge, patient care, and professionalism. The most common non-ACGME competencies included in ILPs were well-being, administrative skills, and scholarly activity. Both advisors and program directors most commonly reviewed completed ILPs with trainees (61%); most (46%) did so every six months as required by the ACGME, though 41% did so every three months, and 14% did so monthly. We found differences in ILP areas between diagnostic and procedural specialties. Procedural specialties more commonly had ILPs directed toward career planning and scholarly activity, compared to diagnostic specialties which more commonly had ILPs focused on medical knowledge and practice-based and lifelong learning. Procedural specialties were more likely only to have the program director review ILPs, whereas diagnostic specialties used both advisor

and program directors.

### **Significance/Implications/Relevance**

We found that resident/fellow ILPs were variably implemented and monitored. Specifically, ILPs in procedural specialties were more commonly reviewed by program directors rather than faculty advisors. Understanding that program directors of procedural specialties take on this responsibility, they can be targeted for faculty development when implementing standardized processes for ILP implementation. In addition, the competencies most commonly addressed differed between procedural-based and diagnostic-based specialties. This nuance should be explored for graduate medical education systems looking to standardize ILP processes. There is also the opportunity to see if the content themes most commonly used in ILPs correlate with Milestones progression.

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## **Poster #21: Process Evaluation and Recommendations for Entrustable Professional Activities Implementation in Saudi Post-Graduate Medical Education**

**Author(s):** Mohammed Almansour, MD, FMEdu; Sami Alhaider, MD, MSc, MBA; Thuraya Kattan, MD, MSc, PhD

**Institution(s):** King Saud University, Saudi Arabia; King Faisal Specialist Hospital & Research Center; SCFHS

**Abstract Type:** Research-focused

### **Background**

Entrustable Professional Activities (EPAs) have gained prominence as a framework for linking clinical responsibilities to competency-based assessment in medical education. Despite global adoption, challenges in implementation persist, particularly in integrating EPAs into national curricula. The Saudi Commission for Health Specialties (SCFHS) initiated a national EPA-based curriculum development project in 2021, aiming to enhance post-graduate medical education. This project sought to address gaps between theoretical competencies and practical clinical work, drawing on lessons from successful implementations in the Netherlands and the United States. A thorough evaluation of the process and outcomes during the second phase of this project provides insights for refining future implementations.

### **Objectives**

This study aimed to evaluate the process and outcomes of the second phase of EPA implementation in Saudi post-graduate medical education. The secondary objective was to assess the experiences and perceptions of stakeholders, including mentors, development teams, and trainee representatives. The study provides key recommendations for enhancing the integration of EPAs into post-graduate curricula.

### **Methods**

A mixed-methods approach was employed, including both qualitative and quantitative data collection. An online questionnaire was distributed to key stakeholders of the EPA project, followed by focus group discussions to explore emerging themes. Quantitative data were analyzed to identify key strengths and challenges, while qualitative data were thematically analyzed using Saldana's six-step approach to identify recurring themes related to communication, management, and curriculum alignment.

### **Results/Outcomes/Improvements**

A total of 31 stakeholders participated in the study. Communication and project management were identified as strengths (3.1% and 1.08% coverage, respectively), while delays (4.79%) and lack of clear planning (4.1%) were key challenges. Participants reported overall satisfaction with the EPA implementation process, highlighting the importance of clear communication and structured timelines for future projects.

### **Significance/Implications/Relevance**

This study provides valuable insights into the challenges and successes of implementing EPAs in a national post-graduate medical education system. The findings emphasize the importance of communication and project management in successfully integrating EPAs into curricula. The recommendations can be applied to similar initiatives globally, offering a framework for other institutions aiming to adopt EPAs as a core component of competency-based medical education.

## **Poster #22: Impact of Dedicated Lactation Spaces on Resident Performance**

**Author(s):** Michelle Drobny, DO; Devki Patel; Vaishnavi J. Patel; Brianna Clark, DO

**Institution(s):** Family Medicine Residency Spokane, STHC; Texas Tech University Health Sciences Center School of Medicine; University of the Incarnate Word School of Osteopathic Medicine; Sunflower Lactation & Health Education LLC

**Abstract Type:** Innovation-focused

### **Background**

Breastfeeding is highly recommended for its numerous benefits, but medical trainees often face challenges, such as demanding work hours and inadequate lactation spaces. Despite regulations mandating lactation support, high-quality studies on effective interventions for medical trainees are lacking.

### **Objectives**

This study aimed to identify barriers affecting breastfeeding duration and resident performance among medical trainees, and to implement and evaluate interventions to support breastfeeding and improve resident well-being.

### **Methods**

In 2021, a survey was administered to 125 residents across various graduate medical programs to assess the impact of having children and breastfeeding. Based on survey data, two interventions were implemented: a dedicated lactation space within the residency clinic and wearable breast pump rentals. Surveys were conducted before and after the interventions, with response rates of 69% and 58%, respectively, and statistical analysis compared the pre- and post-intervention groups.

### **Results/Outcomes/Improvements**

The interventions led to increased breastfeeding duration and improved resident performance. Residents reported longer breastfeeding periods and fewer negative impacts on work performance. There was a decrease in residents taking and extending residency due to parental leave. Dedicated lactation spaces reduced time spent searching for pumping locations and minimized discomfort related to breastfeeding.

### **Significance/Implications/Relevance**

Accessible lactation spaces are crucial in supporting breastfeeding among resident physicians and enhancing their well-being. The interventions significantly improved breastfeeding duration and resident performance perception. Further research with larger sample sizes is needed to confirm these findings. Programs and institutions must prioritize breastfeeding support for medical trainees to foster a supportive learning environment and promote resident well-being.

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**Poster #23: Are Work Hours Actually Linked to Burnout in Residents?**

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**Institution(s):** University of Wisconsin School of Medicine and Public Health; University of Wisconsin-Madison

**Abstract Type:** Research-focused

**Background**

Burnout is prevalent among residents, especially in frontline specialties. Identifying factors that contribute to or mitigate burnout is crucial for reducing burnout. The impact of work hours on burnout and well-being remains unclear, particularly post-pandemic, with no nationwide studies across specialties.

**Objectives**

We aimed to assess the relationship between work hours and burnout among residents in high-burnout specialties, and moderators of that relationship. We hypothesized that longer work hours would be associated with higher stress and burnout, and that higher levels of meaning and purpose would moderate the relationship between work hours and burnout.

**Methods**

A nationwide cross-sectional survey was conducted as part of a randomized clinical trial evaluating a mental skills training intervention among residents in high-burnout specialties (surgery, obstetrics and gynecology, family medicine, internal medicine, and emergency medicine). The survey assessed burnout and well-being outcomes. Multiple regression models examined the associations between work hours, burnout, and well-being, controlling for demographic variables, with model selection based on the Akaike information criterion (AIC).

**Results/Outcomes/Improvements**

A total of 544 residents responded, with 241 (44%) in a surgical specialty, 357 (66%) women, and 356 (65%) White representing 40 states. Mean levels of stress (16.9, SD 6.8), burnout in the subscales of depersonalization (6.6, SD 4.4), and emotional exhaustion (10.9, SD 4.3) were moderate-high range. Longer work hours in the last week was associated with higher perceived stress when controlling for specialty, gender, race, post-graduate level, relationship status, and geographic location ( $p < 0.05$ ). However, there was no association between average work hours and burnout in depersonalization and emotional exhaustion subscales. Furthermore, longer average work hours were associated with less burnout in the personal accomplishment scale ( $p < 0.01$ ). Mindfulness was the only study variable that significantly moderated the relationship between work hours and burnout, such that longer hours worked with increased mindfulness was associated with decreased burnout ( $p < 0.01$ ).

**Significance/Implications/Relevance**

This study reveals that longer work hours were associated with reduced burnout in personal accomplishment, indicating that work hours alone do not explain burnout levels. These results highlight the potentially complex drivers of burnout and well-being and challenge the notion that restriction of work hours alone is a solution to burnout in residents. Future interventions could address factors such as mindfulness to better support resident well-being. Limitations include the self-report bias and the selection bias of the study population, which may affect

generalizability.

## **Poster #24: Examining Mental Health Resources in Graduate Medical Education: Key Findings of a National Survey**

**Author(s):** Margaret Rea, PhD; Uma Anand, PhD; Angela Myers, MD, MPH; Raquel Cabral, PhD, CPH; Jennifer Duncan, MD; Jeffrey Norvell, MD, MBA

**Institution(s):** UC Davis Health; Children's Mercy Kansas City; Washington University, Department of Psychological & Brain Sciences; Washington University; University of Kansas Medical Center

**Abstract Type:** Research-focused

### **Background**

Over recent decades, physician suicide and mental health has garnered increased attention and the high rates of burnout, depression, and suicide among trainees is well documented (1,2,3). In 2017, the ACGME revised its Common Program Requirements and included providing access to confidential and affordable mental health counseling and treatment among the responsibilities of accredited programs. No studies have been published that provide a broad understanding of how programs across the nation are choosing to provide access to mental health counseling for physicians in training. Collecting data on the provision of mental health services by ACGME-accredited programs helps us better understand the current landscape and identify best practices to support the mental health needs of physicians in training.

### **Objectives**

We aimed to identify current practices for the provision of mental health and well-being services to trainee physicians. Information was gathered on the following variables: models of leadership and staffing, services offered, utilization rates, fees for services; assessments, and perceived satisfaction.

The findings can help inform the national conversation on best practices for supporting the mental health and well-being of trainee physicians and highlight where gaps may be present.

### **Methods**

A survey was developed in collaboration with well-being leaders from four participating institutions, and revised following feedback from three well-being leaders, including two Chief Wellness Officers. Individual emails with the survey request were sent to DIOs from 817 institutions nationally between 11/1/2023 and 1/8/2024, including three email reminders. Recipients were asked to forward the survey, if needed, to individuals with best access to counseling services information. The survey included questions about approach to counseling (internal vs external), services offered, reporting structure, hours of availability, fees for services, documentation, number and qualifications of counselors, utilization rates and satisfaction with services. Survey results were analyzed using Statistical Analysis Software (SAS).

### **Results/Outcomes/Improvements**

Out of 815 institutions, 273 completed the survey (34%) and 343 partially responded (42%). Counseling services varied: 52% had multiple resources like external EAP (51%), internal EAP with GME counselors (20%), internal counseling centers (20%), local provider contracts (22%), telemedicine contracts (19%), and other resources (10%). Most (61%) referred to their on-site ED for emergencies, and 16% offered GME-dedicated psychiatric services. Among 139 programs with dedicated GME services, 89% offered brief screening and referral, 96% individual counseling, 29% couples counseling, 35% support groups, and 61% had after-hours

appointments. Only 27% documented in an EMR, 52% of which were separate from the health system, and 15% had utilization data. For institutions with internal services or contracts, 26% had a session limit, and 53% offered free services. Overall, 75% were satisfied with mental health services, with higher satisfaction in institutions with dedicated GME services ( $p=0.01$ ).

### **Significance/Implications/Relevance**

This is the first national study examining how counseling services are offered to physician trainees. Our data suggest there is wide variability which may allow institutions to tailor services to fit their needs. It is notable that only a small percentage of respondents had access to utilization data and thus, there is an opportunity to develop recommendations for key data to inform future services and program enhancements. Systematic collection and sharing of data may facilitate collective learning and address the following: adequate ratio of counseling staff to population served; whether internal services offer greater flexibility and range of services; effective reporting structures; access to psychiatry and/or emergency services; flexibility in scheduling sessions; utility of assessments; and need for a confidential electronic medical record.

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**Poster #25: IMG-Focused Longitudinal Curriculum: Ensuring Professional Success and Well-Being**

**Author(s):** Saba Hasan, MD, MACP; Melanie Haydu, BHA; Rebecca Mallowney, BA, C-TAGME

**Institution(s):** Capital Health System

**Abstract Type:** Innovation-focused

**Background**

Non-US foreign-born international medical graduates (IMGs) filled 30% of the PGY-1 internal medicine residency categorical positions, as noted in 2024 National Residency Matching Program data. Of note, US MD seniors filled 35% and US DO seniors filled 17.4% of the positions. Post-pandemic, the number of non-US foreign-born PGY-1s has been on the rise.

To this end, GME programs should strive to integrate an IMG-focused longitudinal curriculum, starting prior to orientation, to allow IMGs a smoother transition into residency training in the United States. This requires an understanding of the unique and evolving needs of IMGs, working collaboratively with your GME office, and getting buy-in from your Sponsoring Institution (SI) in developing and organizing a longitudinal curriculum.

**Objectives**

- Recognizing and understanding the unique challenges of non-US foreign born IMGs
- Design a longitudinal, competency-based residency curriculum for IMGs, for a smoother transition into US residency programs and sustainable learner success throughout training and beyond
- Create a culture of acceptance for the needs of a diverse group of learners as a norm

**Methods**

In our IMG-friendly internal medicine program, we have sought feedback from our IMG residents on challenges they experienced during their transition into a US residency program and through the first few months of training.

Listening to feedback from our residents has taught us many lessons, most importantly the importance of creating a trusting space for all residents to share their challenges. Learner frustrations related to lack of required skillsets, leading to suboptimal performance and negative effects on their well-being. Learning this, we were able to create a positive learning environment by addressing the most commonly encountered challenges by IMGs, including but not limited to:

- Customized EMR training
- Oral presentation, handoff, and documentation workshops
- Sessions on everyday scenarios like RRT/Code Blue
- Cultural awareness sessions
- Financial and benefits understanding

- Scenario-based discussion prompts
- 1:1 faculty mentorship
- Peer support groups

**Results/Outcomes/Improvements**

Throughout the years, we have successfully equipped our non-US foreign-born IMGs with skills for a successful trajectory during and beyond their residency training.

We stand proud of their accomplishments, with a three-year American Board of Internal Medicine board pass rate of 98%, a 94% match rate into prestigious fellowship programs from many different specialties over the last three years, and graduates progressing into leadership roles following their graduation.

Based on post-graduation feedback received, our residents seamlessly integrate into the fabric of their chosen institutions and earn the respect of not only their medical staff but also their institutional leadership.

**Significance/Implications/Relevance**

The formative years of residency training are key to developing essential skills and behaviors for future professional identity and growth. Given the growing numbers of non-US foreign-born IMGs in our US-based residency programs, it is crucial for GME programs to integrate curriculums in recognition of the unique needs of this exceptional group of highly accomplished individuals with high level of commitment, humanism, and professionalism.

**Poster #26: Feasibility of AI-Driven Personalized Learning for Internal Medicine Residents: Integrating Adaptive AI Beings in Flipped Classroom Didactic Models**

**Author(s):** Marcos Saanchez-Gonzalez, MD, PhD, MSMEd; Noelani-Mei Ascio, MD; Omar Shah, MD; Salman Muddassir, MD, FACP

**Institution(s):** Lake Erie College of Osteopathic Medicine; HCA Florida Oak Hill Hospital

**Abstract Type:** Innovation-focused

**Background**

Artificial intelligence (AI) is becoming an essential tool in graduate medical education, offering opportunities for personalized learning. Internal medicine residency programs face challenges in providing individualized learning that adapts to each resident's needs. Though effective for engagement, the flipped classroom model lacks real-time personalized feedback. This study explores the feasibility of integrating adaptive AI beings into a flipped classroom model to personalize learning for internal medicine residents. AI beings, powered by natural language processing, can tailor learning experiences to each individual, improving efficiency. Research has demonstrated the benefits of AI-enhanced learning, but its role in residency training has been poorly explored.<sup>1,4</sup>

**Objectives**

To evaluate the feasibility of an innovative adaptive AI being modeled to enhance personalized learning experiences for internal medicine residents preparing for in-service exams. The program aimed to determine whether AI-driven personalized learning can improve exam performance and reduce the time spent mastering content.

**Methods**

This program utilized the AI platform edYOU (Los Angeles, CA, USA), which curates learning materials using a personalized ingestion engine (PIE). Residents engaged with AI beings that adapted to their knowledge level, providing real-time tailored conversations. The platform's intelligent curation engine ensured safe and reliable interactions using content flagging and toxicity blocking. The AI beings developed long-term mentoring relationships by adapting to the learners' evolving educational needs. Performance was assessed via in-service exam simulations and resident feedback.

**Results/Outcomes/Improvements**

Residents demonstrated significant variability in engagement with the AI-driven platform, spending an average of 32.3 hours, with individual engagement ranging from a few minutes to over 148 hours. A strong positive correlation ( $r = 0.63$ ) was observed between the time spent on the platform and quiz performance, indicating that higher platform usage was associated with better outcomes. Correct response rates on quizzes varied between 60% and 85%, with residents who spent more time on the platform achieving higher scores. One resident, who spent 148.4 hours on the platform, attained an 85% correct response rate, highlighting the potential for high engagement to improve learning outcomes. Topic engagement was also a critical factor, with an average engagement rate of 82.57%. Additionally, a moderate correlation ( $r = 0.58$ ) between time spent and topic engagement was identified, indicating that more time spent on the platform generally led to higher topic completion rates.

**Significance/Implications/Relevance**

Integrating adaptive AI beings into internal medicine residency training shows significant



potential to enhance personalized education. AI-driven learning tools can be a scalable solution to enhance residency education by improving engagement and learning efficiency. This innovation supports future exploration of AI technologies in medical education, with implications for broader implementation in graduate medical education programs.

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## **Poster #27: Does Resident Gender or Race/Ethnicity Affect Orthopaedic Surgery Case Volume During Residency Training?**

**Author(s):** Parisun Shoga, DO; Ann Van Heest, MD; Elizabeth Ames, MD; Sean Hogan, PhD; Eric Holmboe, MD; Mary Klingensmith, MD; Yoon Soo Park, PhD; Corey Parker, MPA; Erik Solberg, MA; Kimberly Templeton, MD

**Institution(s):** University of Minnesota; University of Vermont; Intealth; Accreditation Council for Graduate Medical Education (ACGME); University of Illinois; American Association of Neurological Surgeons; University of Kansas

**Abstract Type:** Research-focused

### **Background**

Orthopaedic surgery is the least diverse specialty in medicine. Women make up 7.4% of orthopaedic surgeons in practice and 20.4% of orthopaedic surgery residents. In surgical fields, a resident's operative case volume is a surrogate marker for the depth and breadth of educational experience they have received during residency. Residents are required to submit ACGME Case Logs throughout their training. Two recent studies demonstrated gender-based discrepancies in surgical case volume for otolaryngology and ophthalmology residents. It is not known whether gender or racial/ethnicity disparities exist during orthopaedic surgery residency training regarding surgical case volume.

### **Objectives**

The purpose of this study was to evaluate whether gender or racial/ethnicity disparities exist during orthopaedic surgery residency surgical case volume.

### **Methods**

Using the ACGME Case Log System, data for orthopaedic surgery residents graduating in academic years 2013-2014 to 2021-2022 (nine total graduating cohorts) were analyzed. Aggregated records of Case Logs reported by residents by the time of graduation were organized as: (1) case totals across required orthopaedic minimum cases; (2) cases sorted into orthopaedic required minimum categories; and (3) cases sorted into anatomic areas. We used descriptive statistics to examine trends.

### **Results/Outcomes/Improvements**

Longitudinal analyses of total required minimum type cases indicate significant gender differences among the initial graduating cohorts, with women trainees reporting 33 cases fewer than men; over time, women trainees reported five cases fewer than men per year. Underrepresented in Medicine (URiM) trainees reported 29 cases fewer at baseline with no significant differences over time. Significant differences exist for eight of the 15 case minimum types with fewer women cases at baseline; over time, women had fewer cases in ACL Reconstruction, Ankle Fracture Fixation, Closed Reduction Forearm Fracture, THA, and TKA. There were significant differences for three of 15 case minimum types at baseline for URiM trainees with no significant differences over time. Hand was the only anatomic area with women reporting significantly more cases than men; this continued to increase over time.

### **Significance/Implications/Relevance**

Significant differences exist in case volume and case types during orthopaedic surgery residency based on gender for the initial cohort, albeit lessening over time. Although initial differences in cases volumes based on race/ethnicity exist, no significant differences persist

over time. Orthopaedic surgery has made progress over the last ten years, assuring more equitable operative experiences during orthopaedic surgery training, however, discrepancies still exist in specific case minimum and anatomic categories for women and URiM trainees.

**Poster #28: The CB-METR: A New Competency-Based Assessment Tool for Family Medicine Residents**

**Author(s):** Noman Shahid, MD; Matthew Rudolph, MD; Santina Wheat, MD; Adiba Khan, MD; Katy Wright, PhD, MPH; Deborah Clements, MD

**Institution(s):** Northwestern University Feinberg School of Medicine

**Abstract Type:** Innovation-focused

**Background**

Developing and validating new outcomes-based assessments is necessary to support the transition to competency-based medical education (CBME) in family medicine residency programs. The CB-METR (Competency-Based Medical Education Tool for the Observation of Residents) is a standardized assessment tool our group developed to capture the observable behaviors needed to certify family medicine residents in the American Board of Family Medicine (ABFM) Core Outcomes and categorization along the ACGME Milestones. This project describes how the tool and associated resident simulation was developed and implemented across multiple residency programs, including the necessary faculty development to provide formative evaluation of PGY-1 residents at the beginning of their training.

**Objectives**

With ACGME Program Requirements shifting towards competency-based assessment, the authors set out to develop and validate a new assessment tool to map directly observed behaviors to the ABFM Core Outcomes with language derived from the ACGME Family Medicine Milestones 2.0. In addition, the authors set out to develop faculty resources to ensure effective implementation of the new tool.

**Methods**

The authors developed the assessment tool, CB-METR, through three rounds of discussion and exercises to ensure the tool could reliably assess a broad range of clinician performance and was easy to use in multiple practice settings. Though the ACGME Family Medicine Milestones were used as a foundation for the assessment, the tool ultimately included mapping to the ABFM Core Outcomes to keep up with changing recommendations for CBME in family medicine. A scoring key was also developed to share examples of behaviors correlating with each score to improve inter-rater reliability. Faculty were trained to use the tool via a short training video and surveyed on both the video and tool's effectiveness. Sixteen residents from two family medicine residency programs completed an objective structured clinical examination (OSCE) designed to test all aspects of the CB-METR tool. Faculty assessed resident performance in-person, and the OSCEs were video-recorded for additional faculty to review asynchronously.

**Results/Outcomes/Improvements**

CB-METR evaluations will be compared between raters from different residency programs and between both in-person and virtual assessment modalities. Inter-rater agreement will be presented using Fleiss' Kappa. Item response theory analyses will allow the calculation of Cronbach's alpha, the coefficient of determination ( $R^2$ ), and inter-grade discrimination. Faculty survey data will be summarized using descriptive statistics.

**Significance/Implications/Relevance**

The CB-METR is a competency-based evaluation tool that can be implemented easily and early

across any family medicine residency within multiple practice settings. It is designed to capture resident progression throughout their training and determine when residents have achieved the ABFM Core Outcomes. Information gained from the CB-METR tool can also be used to create individualized learning plans for residents by identifying gaps early on, such as with an OSCE simulation in intern year. The tool will also have reliability and validity measurements for more accurate and reproducible assessments. Faculty development centered around the tool also demonstrates using an entrustment framework for all resident evaluations and focusing on observable behaviors for a more objective assessment of residents across all ACGME competencies. This project serves as a practical example of how learning collaboratives, faculty development, and simulation can promote competency-based assessment in GME.

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**Poster #29: Closing the Self-Assessment Gap: Implementation of a Cranial Dissection Curriculum Among Junior Neurosurgical Residents**

**Author(s):** Alankrita Raghavan, MD; Kennedy Carpenter, MD; Michael Haglund, MD; Steven Cook, MD; Rory Goodwin, MD, PhD; Katherine McDaniel, PhD

**Institution(s):** Duke University Hospital

**Abstract Type:** Innovation-focused

**Background**

Neurosurgical education has long relied on the apprenticeship model with trainees learning in the operating room (OR). Multiple studies have shown that there is a self-assessment gap in how surgical residents and attendings perceive resident autonomy, with residents undervaluing their skill and autonomy (1-3). Initial data from our institution demonstrates that this gap is particularly significant among junior neurosurgical trainees. The perception of autonomy is known to impact trainee confidence and is tied to their competence (4). We believe that offering residents the opportunity to practice skills under faculty guidance in a low stress setting can increase resident confidence and bridge the self-assessment gap. To this end, we established a one-on-one cranial dissection curriculum to provide junior residents mentorship and technical coaching in a low-stakes environment and assess its impact on resident confidence.

**Objectives**

To develop and implement a targeted cadaveric cranial dissection curriculum for junior neurosurgical residents utilizing one-on-one coaching and mentorship from faculty members to improve resident confidence, operative autonomy, and surgical competence.

**Methods**

We created a surgical coaching program (SCP) focused on cranial surgery for the Duke University junior neurosurgery residents (PGY-2 and PGY-3 classes) to enhance resident confidence, autonomy, and competence in basic cranial surgical skills. The curriculum was tailored to the level of expectations for PGY-2 and PGY-3 residents and included six total sessions. For PGY-2 residents, these sessions included (1) pinning and positioning, (2) hemicraniectomy, and (3) suboccipital craniectomy. For PGY-3 residents, the sessions were (4) microsurgical techniques, (5) pterional craniotomy, and (6) retrosigmoid craniotomy. Each session consisted of a one-on-one cadaveric dissection or simulation with the resident and faculty member focusing on a single approach. We investigated the self-reported level of confidence, using a Likert scale, among residents before and after the sessions. We also evaluated the faculty level of trust in the residents' skills following each session.

**Results/Outcomes/Improvements**

Resident comfort was assessed across the following sessions: pinning and positioning, suboccipital craniotomy, hemicraniectomy, microsurgical techniques, and pterional craniotomy. Across all sessions, the residents' self-reported confidence improved on average 2.6 points on the Likert scale. There was a statistically significant ( $p < 0.005$ ) increase in resident comfort and confidence after each session. Additionally, each class met or exceeded the faculty expectations during the coaching session and all faculty coaches felt that the residents had increased confidence over the course of the session. Importantly, all faculty coaches who worked with the residents in the OR after the session (4/6) felt that the residents had increased confidence in the OR and would either keep the same amount of autonomy (1/6) or allow for increased autonomy for the residents (5/6).

**Significance/Implications/Relevance**

Our study highlights the effectiveness of a structured cranial dissection curriculum with one-on-one mentorship to close the “self-assessment gap” among junior neurosurgery residents. We demonstrate that targeted coaching not only improves resident confidence but also leads to increased trust by faculty, allowing for increased autonomy in the OR. By fostering a stronger sense of self-awareness and technical competence, this approach may be used to refine neurosurgical education models more broadly. Our next steps include developing procedural rubrics to determine efficacy in the OR as well as expanding the curriculum to include essential spinal neurosurgical procedures. Implementing similar initiatives across residency programs could optimize and standardize resident training. Moreover, addressing the disparity between resident self-assessment and faculty evaluations may promote more accurate self-reflection and trust, ultimately enhancing the safety and efficacy of surgical training.

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## **Poster #30: Navigating the Intersection of Family Medical Leave and Medical Training: Development of a Comprehensive Toolkit to Support Trainees and Programs**

**Author(s):** Nicole Christian, MD, MSCS; Braidie Campbell, MD; Geoffrey Connors, MD; Deb Johnson, BA; Carol Rumack, MD

**Institution(s):** University of Colorado

**Abstract Type:** Innovation-focused

### **Background**

Balancing residency and fellowship training with family planning is a significant challenge for trainees. Trainees cite a fear of burdening colleagues, the potential for delayed graduation, and inflexible and physically demanding work schedules as the most common reasons for delaying childbearing (1). Yet delayed childbearing due to training is linked to adverse pregnancy outcomes, burnout, and reduced well-being (2-4). While welcomed and much needed flexible and paid leave policies are starting to emerge at the GME, Board, and state levels, navigating these overlapping ACGME, American Board of Medical Specialties (ABMS), graduate medical education (GME), state, and federal policies requires significant guidance. With the shifting demographic of medical school graduates, evolving cultural values and priorities, and an increasingly complex and imperfect web of support, institutions and individual programs must take the lead and develop the tools that ensure compliance and foster a culture of support for their trainees and their families (5).

### **Objectives**

To address these challenges, we developed a comprehensive Family and Medical Leave Toolkit at our institution aimed at improving individual program leave policies in light of new state laws and the shifting accreditation and cultural landscape. The toolkit is designed to: (1) help programs navigate state, federal, ACGME, ABMS, and Review Committee-specific regulations; (2) identify opportunities for flexible training options; (3) educate faculty and residents on the impact of family medical leave on trainees and their education; and (4) foster a culture of institutional support for family medical leave.

### **Methods**

Our institution's GME office convened a multidisciplinary Parental & Family Leave Task Force, comprising program directors, coordinators, GME Benefits administrators, and housestaff representatives from diverse specialties and program sizes. This task force collaboratively designed a toolkit to serve the unique needs of over 1,300 trainees in 116 ACGME-accredited and 117 non-ACGME-accredited programs across procedural and non-procedural specialties. The resulting document provides program administrators and trainees with a clear understanding of relevant policies, a breakdown of trainee pay and benefits (including integration of the state's paid leave processes), and detailed guidance on flexible leave structures that can be tailored to individual trainees. It also addresses logistical challenges related to scheduling, as well as postpartum return-to-work considerations, such as lactation accommodations and childcare resources.

### **Results/Outcomes/Improvements**

The state family medical leave program in Colorado went into effect on January 1, 2024. During the 2023-2024 academic year there were 94 family medical leaves. Nine parental leaves and one medical leave were taken before the new law was implemented. In the second half of the academic year, following the introduction of the state program, the number of leaves increased,



with 62 parental leaves and 22 medical leaves recorded. In the preceding academic year, 21/71 (30%) trainees took more than six weeks or less of family medical leave. In the six months following the introduction of the new program, 34/84 (40%) trainees took more than six weeks. Programs utilizing the toolkit have reported high levels of satisfaction among trainees, who note improved perceptions of institutional support for family medical leave. This initiative has proven to be a meaningful step in fostering a more supportive and adaptable training environment for those navigating significant family medical events (6).

### **Significance/Implications/Relevance**

As of August 2024, 13 states and the District of Columbia have passed legislation to create paid family and medical leave programs (7). Our institution's experience shows a trend by which increasing leave is utilized by trainees when such policies are available. Sponsoring Institutions will need new resources to meet this increased demand. The implementation of a comprehensive family medical leave toolkit, in conjunction with new state laws providing paid leave, represents a significant advancement in supporting both trainees and training programs. By institutionalizing policies that are evidence-based, flexible, and supportive, we can enhance trainee well-being, reduce burnout, improve maternal health, and promote both personal and professional development—while ensuring that rigorous training and accreditation standards are upheld. Building a culture of support for family medical leave is essential to fostering a more compassionate and resilient health care workforce.

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## **Poster #31: Baby Fever: Examining the Availability and Quality of Parental Leave Policies and Pregnancy Accommodations on EM Residency and GME Program Websites**

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**Institution(s):** Thomas Jefferson University; New York Presbyterian | Weill Cornell Medicine

**Abstract Type:** Research-focused

### **Background**

Parental leave and maternity policies are important considerations that can influence prospective residents' decisions when selecting residency programs. In 2022, the ACGME mandated that institutions provide a minimum of six weeks of paid medical, parental, and caregiver leave for trainees. However, the implementation and practical application of this policy can vary widely across specialties and individual programs. Despite the importance of these policies, little to no research to date has shed light on the transparency of parental leave information, particularly on emergency medicine (EM) program-specific or graduate medical education (GME) websites, which are often the first point of contact for applicants. The accessibility of this information is crucial as policies vary widely and applicant inquiries about pregnancy accommodations and parental leave have been traditionally stigmatized.

### **Objectives**

This study aimed to evaluate the availability and quality of family leave and pregnancy accommodation information provided on the websites of EM residency programs and their related GME sites. Specifically, we sought to determine how many programs disclose parental leave policies on their EM websites, provide links to general GME sites with relevant policies, or lack such information altogether.

### **Methods**

Descriptive statistics were collected from 285 EM residency program websites and their related GME websites in July 2024. Chi-square tests were then performed to determine whether the website availability of parental leave information was associated with program director gender, program size, or program age.

### **Results/Outcomes/Improvements**

Twenty-nine program websites (10.2%) had parental leave information available: 16 (5.6%) detailed specific leave policies and 13 (4.6%) mentioned available parental leave. Two programs (0.7%) detailed specific accommodations for pregnant residents. Sixty-two program websites (21.8%) provided a direct link to their GME website, which contained leave information. On their GME website, 149 programs (52.3%) had information regarding parental leave: 54 mentioned parental leave, while 94 gave detailed information about compensation and length of leave. One hundred-thirty programs (37.5%) had no relevant information available on either site.

Larger (>11 annual positions) and older (est. 2010 or earlier) programs were more likely to provide parental leave information [ $\chi^2(1, N = 285) = 5.91, p = 0.015$ ;  $\chi^2(1, N = 285) = 5.95, p = 0.015$ ]. We found no significant association between program director gender, program length, or program region and the presence of parental leave information on EM program or GME websites.

**Significance/Implications/Relevance**

Our findings reveal significant gaps in the availability of parental leave and pregnancy accommodation information across EM and GME program websites, underscoring the necessity for all medical specialties to improve transparency and accessibility. Providing clear and reliable information is crucial to support prospective residents who may be hesitant to inquire about these policies during interviews. Enhancing these resources will contribute to a more inclusive and supportive training environment, ultimately benefiting both residents and program leadership.

## **Poster #32: Obstetrics and Gynecology Residency – A Time Motion Analysis Evaluating Workload and Time Management**

**Author(s):** Alejandra Cacheiro, MD; Felicia Lane, MD

**Institution(s):** University of California, Irvine

**Abstract Type:** Innovation-focused

### **Background**

Back in 2003, the ACGME proposed a major change resulting in an 80-hour work week across all residency programs. While these policies are frequently reassessed, understanding residents' workflow and time management skills is essential for evaluating current and future duty hour changes. Issues with time management and work shift length have raised concerns regarding quality of life for physicians in training. Literature suggests that shorter work schedules could significantly improve sleep quality, fatigue levels, and overall well-being among residents. Additionally, long work hours (over 48 hours per week) have been shown to raise the risk of errors in patient care and fatal accidents. By assessing workflow and time allocation, we can maximize residents' efficiency, improve their well-being, and enhance the quality of patient care.

### **Objectives**

Our quality improvement project seeks to examine the distribution of residents' time spent across a work week and identify strategies for safely reducing non-essential tasks while maintaining essential training experience.

### **Methods**

Between April and June of 2024, residents from our institution's obstetrics and gynecology residency program (PGY-1-PGY-4) were shadowed by trained data scribes. Scribes documented time management by tracking and recording the duration of both clinical and non-clinical activities throughout their shifts. To achieve this, training sessions were structured and included review of the data collection tool, which consisted of a predefined list of 58 tasks from nine distinct categories, along with common medical terms and activities related to residents' daily life. This facilitated norming of the data collection protocol and provided consistent documentation of daily activities. For all shifts, recorded duty hours were compared to logged hospital hours using the MedHub system.

### **Results/Outcomes/Improvements**

Out of 27 ob/gyn residents, only 14 (51.9%) participants were rotating at our institution's facilities during the data collection period. Overall, 28 observation shifts were randomly scheduled across eight rotations: Gynecology Day, Gynecology Night Float, L&D Day, L&D Night, Oncology, Ambulatory, Community Clinic, and Jeopardy. A total of 11,357 minutes were observed resulting in 1,017 recorded tasks. Direct Care activities, including operating, chart checking, and delivery, were the most tracked during the study (6,480 minutes, 57.1%). Documentation and Administration activities were the least observed throughout the various rotations, encompassing 190 (1.7%) and 453 (4.0%) minutes, respectively. The observed average weekly hours were 69.5h, while the logged average weekly hours were 74h. We estimated a feasible reduction of 5h, without any changes to daily activities, indicating a total of 75 hours per week, still within the duty hours limitations outlined by the ACGME mandate.

### **Significance/Implications/Relevance**

Our results indicate that reducing resident work week hours to 75 hours is feasible based on our observed data. Strategies aimed at reducing workload associated with Documentation and Administrative tasks could further support this schedule adjustment. While Direct Care activities were the most prevalent in our study, Documentation and Administration tasks were the least recorded. However, when combined, both categories comprised a total of 10.7 recorded hours. Thus, with appropriate staffing that could oversee some of these responsibilities, such as scribes and/or advanced practice providers, we could potentially reduce work week hours to 65 hours without compromising direct patient care. Further research is needed to evaluate the impact of such restrictions across different specialties, as well as their effects on residents' efficiency, quality of life, and patient care.

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## **Poster #33: Evaluating Applicant Preferences of Virtual Versus In-Person Residency Interviews: Insights from the 2023-2024 Otolaryngology Application Cycle**

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**Institution(s):** Macon & Joan Brock Virginia Health Sciences at Old Dominion University Dept. of Otolaryngology; University of California at San Francisco; University of California at San Francisco, Dept. of Otolaryngology; Association of American Medical Colleges

**Abstract Type:** Research-focused

### **Background**

The COVID-19 pandemic disrupted the residency application process in many ways, including a shift to virtual interviews for most residency programs for the 2020-2021 recruitment cycle. In August 2021, the Coalition for Physician Accountability (COPA) recommended programs continue conducting virtual interviews to decrease costs for applicants and programs and increase applicant equity by improving accessibility to applicants from lower socioeconomic statuses. Since then, applicants and programs have reported difficulty standing out in the virtual setting, reduced exposure to medical campuses and surrounding regions, and limited opportunity to establish personal connections between applicants and programs. The 2023-2024 otolaryngology application cycle represented the first time many applicants were offered both virtual and in-person interviews. Applicant preferences between virtual and in-person interviews remain largely unexplored when both formats are available.

### **Objectives**

To assess the perceptions of otolaryngology applicants regarding virtual versus in-person interviews during the 2023-2024 application and residency recruitment cycle.

### **Methods**

A 20-question survey was distributed via email through the Association of American Medical Colleges to otolaryngology-head and neck surgery applicants during the 2023-2024 application and residency recruitment cycle. Data were analyzed using descriptive statistics and statistical significance tests (Pearson's chi-square and Fisher's exact tests) to compare responses across different demographic groups.

### **Results/Outcomes/Improvements**

The survey achieved a 39% response rate. Seventy-two percent of respondents preferred in-person interviews and subgroup comparisons showed no significant difference between genders. Applicants that identify as underrepresented in medicine (URIM) reported a slightly higher than expected virtual interview preference ( $p = 0.001$ ) compared to the entire cohort, but maintained a strong overall preference for in-person interviews (69%) versus virtual (29%). A majority of respondents (76%) preferred allowing individual programs to decide on their interview format. In-person interviews received higher satisfaction rates, with 54% of respondents being very satisfied compared to 11% for virtual interviews. Most applicants agreed or strongly agreed that virtual interviews were less stressful (56%) and less disruptive to their academic schedules (75%); yet most applicants (62%) disagreed or strongly disagreed that the cost savings of virtual interviews outweighed the advantages of in-person interviews.

### **Significance/Implications/Relevance**

As the post-COVID landscape evolves and in-person interviews are reintroduced, our findings

can guide residency programs in structuring future recruitment efforts to align with applicant preferences. Otolaryngology applicants show greater satisfaction with, and preference for, in-person interviews despite the reduced stress and cost savings of virtual interviews. While applicants noted equity concerns with in-person interviews, these concerns did not lead applicants to favor virtual interviews. Programs with an in-person interview approach should look for strategies to mitigate inequities. These could include financial support for resource-limited applicants and a hybrid approach with virtual interview opportunities. Future efforts should explore program preferences for interview formats, investigate hybrid models combining in-person and virtual elements, and continue examining the equity of interview type among applicants from all specialties.

## **Poster #34: Rater Bias and Between-Subgroup Analysis of Residency Application Ratings During Holistic Review**

**Author(s):** Stefanie Sebok-Syer, PhD; Leandra Barnes, MD; Stefanie Wind, PhD; Kirstin Nord, MD; Elizabeth Bailey, MD

**Institution(s):** Stanford University; The University of Alabama

**Abstract Type:** Research-focused

### **Background**

Holistic review has been shown to advance equity and reduce bias using metrics such as the number of applications reviewed, number of individuals ranked, and number of individuals matched to a residency program, but what remains underexplored is the presence and impact of rater effects during the holistic review of residency applications. Understanding the extent to which rater effects exist within the holistic review process can help ensure that our diversity, equity, and inclusion efforts to improve graduate medical education admissions are not simply trading old problems for new ones.

### **Objectives**

The purpose of this research is twofold: 1) To measure the presence of bias in the holistic review of residency application rating data while accounting for gender and underrepresented minority in medicine (URM) status; 2) To assess the extent to which rater judgments vary when there is concordance or discordance between rater and applicant demographic characteristics as they relate specifically to gender and URM status (i.e., race).

### **Methods**

In this cross-sectional study, we analyzed 10 years (i.e., 2014 to 2023) of dermatology residency application rating data from a single institution to assess for differential rater functioning (DRF; i.e., rater bias) related to applicant demographic subgroups. To provide an additional perspective on DRF, we also calculated between-subgroup fit statistics for individual raters. Our dataset included specifics about the applicants applying to the institution's dermatology residency program, as well as the dermatology faculty raters. To assess the presence of gender bias in this study, we used the following categorization: Female, Male, and unknown; and to assess URM status we used the following: White, non-White and non-URM, URM, URM status unknown.

### **Results/Outcomes/Improvements**

The DRF analysis showed the presence of rater bias against female candidates and those with URM status. Additionally, when the gender or URM status of the rater was consistent with the applicants, we found there to be more favorable ratings. Over half of individual raters showed unexpected severity in their ratings based on applicants' gender, rating male and female applicants more leniently (i.e., providing ratings higher than expected). Over one-third of raters exhibited bias based on URM status, treating White applicants more leniently (with higher scores) and URM status applicants more severely (with lower scores). Preliminary analyses suggest half of individual raters were more severe in their ratings than expected when gender or URM status matched the applicants, and the opposite was true for discordant pairs. The between-subgroup analysis showed bias related to applicants' gender and URM status and bias was amplified when the rater's gender or URM status matched the applicant.

### **Significance/Implications/Relevance**



This study shows bias related to applicants' gender and URM status in real-world holistic review residency application ratings from a single dermatology department over a 10-year timeframe. These findings have implications for how we promote equity and mitigate bias in residency application review process at the program level, particularly for underrepresented groups within dermatology. Further studies are needed to assess the generalizability of these findings within dermatology and identify and mitigate bias in the graduate medical education selection processes of other clinical specialties.

## **Poster #35: GOCComm: Goals of Care Communication Skills Training for Residents and Fellows Across a Large Hospital System**

**Author(s):** Cynthia Pan, MD; Aushja Syed, MD; Evgenia Litrivis, MD; Julie Hong, MD; Alexandra Spinelli, MA; Kimberly Bloom-Feshbach, MD; Melissa Patterson, MD, MBA; Elizabeth Brondolo, PhD

**Institution(s):** NewYork-Presbyterian Queens; St. John's University; NewYork-Presbyterian Weill Cornell Medicine; NewYork-Presbyterian Allen Hospital

**Abstract Type:** Research-focused

### **Background**

Residents and fellows are often the frontline clinicians caring for seriously ill patients and need high-quality goals of care (GOC) communication training (You, 2015). According to the ACGME Common Program Requirements, "Residents must learn to communicate with patients and patients' families to partner with them to assess their care goals, including, when appropriate, end-of life (EOL) goals" (ACGME, 2024). Residents have an important role in discussing GOC with patients, including at EOL (Blinderman 2022). Yet trainees often do not receive experiential training necessary to develop the skills and confidence to engage in GOC discussions with patients (Block, 2002), leading to missed opportunities for goal-concordant care, underutilization of hospice, and decreased care quality.

### **Objectives**

To implement GOCComm: Goals of Care Communication Training for Frontline Clinicians across the NewYork-Presbyterian (NYP) health system; and evaluate effects on resident and fellow knowledge, self-efficacy, and distress tolerance during emotionally-demanding GOC discussions.

### **Methods**

GOCComm was part of a Quality-and-Patient-Safety (QPS) initiative across NYP hospitals. Residents and fellows were a subgroup of this larger cohort of frontline clinicians who underwent training, with program directors incorporating GOCComm into curricular time. GOCComm was implemented as four-hour didactic and experiential small group workshops. We trained facilitators to coach learners in drills and navigate "family meetings" with simulated patient (SP) encounters to build relationships, prognosticate, manage emotion and conflict, and make values-concordant EOL recommendations. Trainees received real time feedback from peers and facilitators. We performed pre- and post-test surveys to measure resident and fellow knowledge, self-efficacy, and distress tolerance during GOC discussions. We evaluated the program using mixed-method evaluations. An intention-to-treat analysis was utilized.

### **Results/Outcomes/Improvements**

Between 4/2022-8/2023, we trained 29 facilitators and conducted 18 workshops. Of 186 frontline clinicians, 69 participants (37%) indicated a post-graduate training level (PGY): PGY-1 (n=32; 46%), PGY-2 (n=6; 9%), PGY-3 (n=4; 6%), PGY-4 (n=16; 23%), PGY-5 (n=8; 12%), PGY-6 (n=2; 3%), and PGY-7 (n=1; 1%). 48% of the residents were women (n=33). Residents and fellows self-identified as: White (n=27; 40%), Asian (n=25; 37%), Hispanic White (n=6; 9%), Hispanic Black (n=2; 3%), Non-Hispanic Black (n=2; 3%), and Other (n=5; 7%). Among residents and fellows, completion of GOCComm was linked to significant gains in knowledge ( $p < .001$ ), self efficacy ( $p < .001$ ) and distress tolerance ( $p < .001$ ) post GOCComm training. Qualitative data analysis revealed that participants valued specific skills (power of empathy, headlines and

prognostic tools) and appreciated developing a shared vocabulary and process for moving through challenging conversations in an organized and effective manner.

### **Significance/Implications/Relevance**

GOCComm was successfully implemented as four-hour didactic and experiential small group workshops across multiple hospitals in the NYP health system. Residents and fellows comprised 37% of the frontline clinicians who were trained. GOCComm presents an effective resource for frontline physicians-in-training to learn empathic communication skills and gain knowledge and confidence for patient-centric GOC discussions, including for those at EOL. It was a unique opportunity for trainees to put these skills into practice and get real time feedback from peers and subject matter experts.

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**Poster #36: The Impact of Program Coordinator Turnover on Residency Programs: Effects on Performance, Accreditation, and Resident Support**

**Author(s):** Melody Alijani, MS; Emma Garcia-Rider, MD; Arden Dingle, MD; Emily Mainwaring

**Institution(s):** UNR MED; University of Nevada, Reno

**Abstract Type:** Research-focused

**Background**

Program coordinators play a pivotal role in the administration and success of residency programs, providing essential support for operational continuity. The literature on health care staffing consistently highlights the negative effects of turnover on organizational stability, yet there is limited research specifically addressing its impact within graduate medical education (GME). Previous studies have shown that staff turnover can disrupt workflows, lead to a loss of institutional knowledge, and decrease overall morale. However, the specific effects on residency programs—particularly concerning program coordinators—remain underexplored. This study aims to address this gap by investigating how program coordinator turnover may affect program stability, performance, accreditation outcomes, and resident support.

**Objectives**

The primary objective of this study is to assess the potential effects of program coordinator turnover on residency programs, focusing on program stability, performance, and accreditation. The research seeks to identify possible disruptions caused by turnover, such as challenges in resident support and compliance with accreditation standards. Additionally, this study aims to propose best practices for mitigating these impacts and ensuring smooth transitions when turnover occurs.

**Methods**

This research involves a retrospective analysis of residency programs that have recently experienced program coordinator turnover. Data collection is ongoing and includes key indicators such as accreditation outcomes, resident evaluations, and program performance metrics. A comprehensive review of existing literature has been conducted to contextualize the anticipated findings within broader trends in health care staffing and GME administration. Additionally, qualitative interviews with faculty, residents, and administrative staff are being performed to assess the perceived impact of turnover. The study's quantitative component will focus on expected changes in compliance and performance metrics, while the qualitative analysis will explore anticipated themes related to operational disruption and resident support challenges.

**Results/Outcomes/Improvements**

While data analysis is still in progress, it is anticipated that program coordinator turnover will be associated with significant disruptions in residency programs, particularly in terms of accreditation compliance and resident support. It is expected that programs lacking succession planning and robust onboarding procedures may experience more pronounced negative effects, such as delays in documentation for accreditation site visits and decreased resident satisfaction. Conversely, programs with established hand-off processes and institutional support are likely to mitigate these disruptions more effectively, highlighting the importance of strategic turnover management.

**Significance/Implications/Relevance**

The anticipated findings of this study are expected to underscore the critical role of program coordinators in maintaining the stability and performance of residency programs. By aligning with existing literature on staff turnover, the study aims to emphasize the need for robust succession planning, institutional support systems, and streamlined onboarding processes to minimize the negative impacts of turnover. The expected outcomes of this research have broad implications for GME administrators and accrediting bodies, suggesting that improved coordinator support and structured transitions can help prevent accreditation risks and enhance resident well-being. Ultimately, the study seeks to contribute to best practices in GME by providing insights and recommendations for maintaining program continuity despite turnover.

## **Poster #37: Assessing Knowledge of Expectations as a Barrier to Pediatric Residents in Providing Feedback to Medical Students**

**Author(s):** Ryan Hanson, MD; Maya Neeley, MD

**Institution(s):** Vanderbilt University Medical Center

**Abstract Type:** Innovation-focused

### **Background**

It is well-known that feedback is critical to the development of medical students. The UCSF Equity in Assessment Guidelines and Checklist recommends sharing clerkship expectations and personal expectations to students from the beginning. It also specifies that comparing students to each other fosters inequity and that students should be evaluated based on the clerkship expectations (1). Additionally, the Liaison Committee on Medical Education and ACGME have both affirmed the importance of resident physicians in medical student education (2). Therefore, it would be beneficial to train residents on providing effective feedback that includes information on the clerkship expectations to help residents give objective feedback without comparing students. There is limited literature on the impact that resident understanding of medical student expectations has on their providing feedback to students.

### **Objectives**

To assess the understanding of medical student expectations as a barrier to pediatric residents in evaluating and providing objective feedback to medical students and suggest curriculum to train residents in providing objective feedback.

### **Methods**

First-year pediatric resident physicians were recruited for this study via email and in person at their educational conference. Residents were administered a de-identified survey with scaled and free text response questions assessing their perceptions on their understanding of the expectations for medical students on their pediatric clerkship rotation, what prior experiences contributed to this understanding, and their confidence in giving feedback to medical students. Scaled questions were assigned numerical values from 1 (very uncomfortable) to 5 (very comfortable). Correlation between scaled questions were analyzed with linear regression models. Gender differences in perceived comfort was analyzed with unpaired t-tests. Residents then received an interactive educational lecture on the expectations for medical students on their clerkship rotation. At the end of the presentation, residents were educated on the "Ask, Tell, Ask" model of giving feedback (3).

### **Results/Outcomes/Improvements**

Twenty-eight first-year pediatric resident physicians completed the survey. When asked how comfortable they were with their understanding of the expectations for clerkship students on their hospital medicine rotation, 33.3% responded "very uncomfortable" or "somewhat uncomfortable" and 29.2% were "neutral." There was no significant difference between men and women in their perceived understanding of expectations ( $p=0.82$ ). Of the nine respondents who were "somewhat" or "very comfortable" with the expectations, the most common source of this comfort was from personal experience as a medical student (66.7%) and prior experience working with medical students (66.7%). When asked how comfortable they were with providing feedback to students, 60% of respondents were "somewhat" or "very comfortable," 30% were "neutral," and 10% were "somewhat uncomfortable." There was no significant correlation between perceived comfort with expectations and comfort with giving feedback ( $R=0.19$ ,

p=0.42).

### **Significance/Implications/Relevance**

Our survey results demonstrated that first-year pediatric residents generally did not feel confident in knowing the expectations for medical students on their pediatric clerkship rotation. Those who did feel confident derived this knowledge from personal experiences as a student or working with students as opposed to formal education on the expectations. We did not find a correlation between resident comfort in the expectations and comfort in giving feedback, which leads us to believe the feedback being given is likely not directed towards the course learning objectives. This demonstrates that it would be prudent to develop educational curriculum for residents to learn the expectations for students, as this is a likely barrier to residents providing objective feedback.

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## **Poster #38: Implementing an Electronic Health Record Resource to Help Matched International Medical Graduates Transition into Residency**

**Author(s):** Jessica Salt, MD; Lyuba Konopasek, MD

**Institution(s):** FAIMER, a division of Intealth

**Abstract Type:** Innovation-focused

### **Background**

While electronic health records (EHRs) are used throughout the United States, EHR use in other parts of the world varies widely. While US medical students use the EHR throughout the third and fourth year of the curriculum, many international medical graduates (IMGs) have not had significant exposure to the EHR. As a result, many IMGs are less prepared to navigate the US health care system when they begin residency. FAIMER, a division of Intealth, developed a learning module, "Introduction to the U.S. Electronic Health Record," that is available to all matched IMGs. The learning module aims to help incoming IMGs become familiar with the look, layout, and common tasks of an EHR system. The module is not intended to take the place of a residency's EHR training. Rather, through learning in advance how EHRs are implemented in the US and gaining experience using an EHR, it aims to prepare IMGs to get the most out of their residency system's specific EHR orientation.

### **Objectives**

"Introduction to the U.S. Electronic Health Record" introduces IMGs to fundamental features and capabilities of EHRs. In the first part, users learn about unique features of EHRs in the US, such as legal considerations and expectations for clinical documentation. In the second part, users can practice using an EHR to care for sample patients. As they work through three patient scenarios they watch instructional videos and practice the following tasks: logging in and out of the EHR; searching for a patient record; reviewing a patient's medical conditions; reviewing a patient's current medication list; reviewing a patient's vital signs; reviewing a patient's test results; reviewing a patient's encounter notes; writing an encounter note; writing a procedure note; documenting a medication allergy; ordering medications; ordering laboratory studies; and preparing discharge paperwork.

### **Methods**

The learning module was piloted in 2023 to a subset of matched IMGs. The rollout went smoothly, with only a small number of learners reporting usability issues. Learners could opt to complete an anonymous survey following the module, and of the respondents, 83% reported that completing the learning module helped them feel better prepared for their residency's EHR orientation. Based on additional feedback, another sample case was added with expanded EHR tasks for the 2024 launch, and the learning module window of availability was extended by a month, with access available May 6 through June 30, 2024. The EHR version was updated, and technical issues were addressed in preparation for 2024. An outreach plan involving targeted communications with IMGs and program directors (PDs) was launched. Social media posts directed potential users to an EHR landing page with enrollment information and FAQs.

### **Results/Outcomes/Improvements**

For 2024, 856 unique users logged into the EHR module. A post-module survey was completed by 24% of users. Overall, the learning module functioned well from a technical standpoint and was well-received by users who completed the survey. Of the respondents, 95% were non-US IMGs, 38% reported that their PD requested that they complete the module, and only 15%



reported having “plenty” of experience with EHRs prior to beginning the learning module. Eighty-one percent (81%) of users either agreed or strongly agreed with the statement “I would recommend this learning module to other residents prior to beginning their residency.” The majority of respondents experienced no problems during the learning module. Nearly three-quarters of respondents cited their experience with the hands-on EHR as the most helpful section of the learning module. When asked about ideas for improvement, the most common suggestion was to expand the number/complexity of sample cases.

### **Significance/Implications/Relevance**

When beginning a US residency, many IMGs have less exposure to the use of EHRs in the US than US medical graduates. FAIMER developed a learning module that IMGs can complete prior to their residency orientation. It aims to familiarize them with the common features of EHRs and their use in the US, so that IMGs can get the most out of their residency’s EHR orientation. The quantitative and qualitative data demonstrate that “Introduction to the U.S. Electronic Health Record” functioned well from a technical standpoint and contained information that learners felt would help prepare them to use an EHR in their residencies. The learning module will be offered to matched IMGs in 2025. Future efforts will include continuing to enhance and update the content, refining the user experience, and expanding outreach efforts to ensure matched IMGs and their GME programs are aware of this free module aimed at helping IMGs transition into residency.

## **Poster #39: Implementation of a Novel Automated Method for Resident Procedure Logging**

**Author(s):** Brian Kwan, MD, MS; Brian Clay, MD; Michelle Daniel, MD, MHPE; Charles Goldberg, MD; Christopher Longhurst, MD, MS

**Institution(s):** University of California San Diego School of Medicine

**Abstract Type:** Innovation-focused

### **Background**

The ability to safely execute bedside procedures is a critical component in many residency training programs. Additionally, the ACGME has included procedural proficiency among its six Core Competencies for graduate medical education. (1) The typical workflow for reporting procedural completion relies on residents manually documenting procedure completion using a third-party residency management software (RMS) application. However, this workflow is fraught with difficulties that limit the accuracy and validity of the resulting data. (2-4, 5, 6) Prior efforts to address this problem were limited by reliance on systems not in widespread use (7) and/or the inability to directly transmit data from the electronic health record (EHR) to an RMS system. We sought to solve these outstanding issues by automation of procedure data transmission via application programming interface (API) directly from an EHR to an RMS, and moreover using EHR and RMS platforms in widespread use.

### **Objectives**

To describe the design, deployment, and performance assessment of an automated system for resident bedside procedure logging based on EHR data.

### **Methods**

Procedural completion data was extracted from the relational database (Clarity) of the EHR in use at our institution (Hyperspace, Epic Systems Corporation) and directly compared to data manually logged by the same residents in the same timeframe in an RMS (MedHub) to minimize the extent of observer bias during the course of one year (May 23, 2022-May 7, 2023). Direct transmission of procedure data to an RMS (MedHub) via the RMS API was initiated on May 8, 2023 and accuracy of procedure capture through June 25, 2023 was assessed by resident interview.

### **Results/Outcomes/Improvements**

During the study period, 4,291 procedures were manually logged by residents, compared with 7,617 procedures captured by the automated system (an increase of 78%). The automated system outperformed the standard workflow involving manual logging for virtually all procedure categories. During the accuracy assessment portion of the study, there were 266 true-positive results, seven false-negative results, zero false-positive results, and 1,080 true-negative results. From these values, we calculated a recall (sensitivity) of 97.4%, specificity of 100%, and an overall accuracy of 99.5%.

### **Significance/Implications/Relevance**

A system was built that successfully automated the process of resident bedside procedure logging resulting in a substantial increase in the number of procedures captured compared to standard manual logging workflows, and with a high degree of accuracy. This system utilizes an EHR in use at most academic medical centers across the United States and an RMS employed by over 10,000 training programs around the world, and was built using standard EHR

functionality and making use of a novel application programming interface-based approach. To our knowledge, this represents the first generalizable solution to a vexing problem that has existed in graduate medical education for decades.

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## **Poster #40: Harmonizing Dual-Track Systems: A Blueprint for Integrating ACGME and Non-ACGME Training Programs**

**Author(s):** Barbara Gohre, BSHA, TAGME, CHPM, CLSSBB; Amy Bailey, MBA

**Institution(s):** Phoenix Children's Hospital

**Abstract Type:** Innovation-focused

### **Background**

Integrating ACGME[-accredited] and non-ACGME[-accredited] programs within a single institution presents unique challenges, including differences in work hour monitoring, accreditation prerequisites, and trainee supervision. Previous studies have highlighted the complexities of managing dual-track systems, emphasizing the need for cohesive strategies (Appiah-Pippim et al., 2020). This project aims to provide a comprehensive guide for managing these programs simultaneously, ensuring compliance with regulations, and enhancing curriculum strategies. The "Program Integration Roadmap" is introduced as a tool to champion training program individuality and inclusivity, addressing potential conflicts and promoting a unified graduate medical education (GME) experience. By leveraging this roadmap, institutions can foster a collaborative environment, streamline administrative processes, and improve overall trainee satisfaction and outcomes.

### **Objectives**

The primary objective of this project is to develop and implement a comprehensive "Program Integration Roadmap" that facilitates the seamless integration of ACGME[-accredited] and non-ACGME[-accredited] training programs within a single institution. This roadmap aims to address and resolve potential conflicts arising from differences in work hour monitoring, accreditation prerequisites, and trainee supervision. By promoting training program individuality and inclusivity, the roadmap seeks to enhance compliance with regulatory standards, streamline administrative processes, and improve curriculum strategies. Additionally, the project aims to foster a collaborative environment among designated institutional officials (DIOs), program directors (PDs), and program administrators (PAs), ensuring effective communication and resource sharing. Ultimately, the objective is to improve overall trainee satisfaction and outcomes, advancing the quality and efficiency of GME programs.

### **Methods**

The project utilized a mixed-methods approach to develop and implement the "Program Integration Roadmap." Initially, a comprehensive literature review was conducted to identify best practices and common challenges in integrating ACGME[-accredited] and non-ACGME[-accredited] programs. This was followed by qualitative interviews with multiple DIOs and PAs to gather insights and practical experiences. A national survey was also distributed. Based on these findings, the roadmap was designed to address key areas such as work hour monitoring, accreditation prerequisites, and trainee supervision. Within our institution, this roadmap has been piloted, and new processes for annual program reviews and updates for both ACGME[-accredited] and non-ACGME[-accredited] Non-Standard Training (NST) programs have been established. This includes an overarching tracking database for all programs' annual program evaluations and ACGME Accreditation Data System (ADS) updates. The final version of the roadmap is now ready for broader implementation.

### **Results/Outcomes/Improvements**

The implementation of the "Program Integration Roadmap" led to significant improvements in

the integration of ACGME[-accredited] and non-ACGME[-accredited] programs at our institution, from AY21-22 to present we have tracked significant percentage of increases in alignment between our non-ACGME[-accredited] (NST) programs and our ACGME[-accredited] programs. Differences in standard operations, monitoring, and program oversight between the two types of programs were markedly decreased. This harmonization allowed for a more cohesive and streamlined approach to managing both program types. Additionally, GME Leadership experienced an increased ability to monitor and streamline processes across all programs. New processes for annual reviews and action items were established, including an overarching tracking database for all programs' action items and ACGME ADS updates. These changes resulted in an average of 10%+ increase in compliance in all areas tracked! This year we are tracking to have an increased compliance rate of 25% or above.

### **Significance/Implications/Relevance**

The “Program Integration Roadmap” has far-reaching implications beyond the local setting. By providing a structured approach to integrating ACGME[-accredited] and non-ACGME[-accredited] programs, this project offers a scalable model that can be adopted by other institutions facing similar challenges. The roadmap’s success in harmonizing standard operations, monitoring, and program oversight demonstrates its potential to enhance the quality and efficiency of GME on a broader scale. Institutions adopting this model can expect improved compliance with regulatory standards, streamlined administrative processes, and increased trainee satisfaction. Furthermore, the roadmap fosters a collaborative environment, promoting best practices and resource sharing across institutions. This initiative not only advances the field of medical education but also contributes to the development of a more unified and effective health care workforce.

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## **Poster #41: Evaluation of a Multi-Faceted Strategy to Increase Utilization of Graduate Medical Education Resources to Improve Well-Being**

**Author(s):** Alex Bassil, BA; Giuseppe Yanez, BS; Lucy Meyer, MD; Rebekah Boyd, MD; Alankrita Raghavan, MD; Jane Caffrey, MPH, MB, PCC; Robert Tisherman, MD; Marla Wald, MD; Aimee Zaas, MD; Betty Staples, MD; Dean Taylor, MD; Joe Doty, PhD

**Institution(s):** Duke University School of Medicine; Duke University Hospital; Duke University

**Abstract Type:** Innovation-focused

### **Background**

Burnout is one of the most important issues facing the US health care system with physician burnout being associated with increased rates of medical errors, reduced quality of patient care, and increased rates of suicidal ideation in providers (1,2). Graduate medical trainees, including residents and fellows, are front-line providers with rates of burnout as high as 47-73% (3).

Meaningful measures to reduce burnout in trainees remain elusive, with sparse literature detailing interventions that can move the needle of this complex problem.

A survey of graduate medical trainees and faculty found that lack of work-life balance and system inefficiencies with documentation requirements and administrative burden were among the most common themes cited for burnout (4). This study suggested that wellness is impacted by the small hang-ups that trainees encounter on an everyday basis.

### **Objectives**

Our graduate medical education (GME) population consists of 1,461 trainees (1,089 in ACGME-accredited programs). Our Graduate Medical Education Committee subcommittee for resources and well-being implemented a novel program to reduce the cumulative impact of “minor” daily hassles called the “Pebbles in Your Shoes” program. The program initially consisted of a Qualtrics survey which routed responses to the subcommittee for triage to the appropriate party. The goal has been to address the seemingly insignificant stressors which can impact wellness.

Twelve months after the launch of the program, utilization remained low. As part of a medical education leadership development program (5), participating trainees partnered with the subcommittee to develop a multi-faceted marketing campaign to increase utilization of the initiative. Our primary outcome was utilization of the program. Secondary outcomes were awareness and perceived effectiveness of the program by trainees across the institution.

### **Methods**

Working with GME leaders, we consolidated the Pebbles survey with an existing survey posted in the weekly newsletter and call rooms that responded to individual or call room issues. Trainees now had a single, widely accessible access point for GME resources for which the GME office could track utilization.

After obtaining IRB exemption, a voluntary Qualtrics pre-survey was sent to all GME trainees at our institution to assess baseline awareness of the Pebbles program. One week later, we employed the following strategies to enhance visibility and engagement in the program:

-Logo by graphic designer

-Posters in GME call rooms and badge tags with new logo and a QR code linking to survey

-Feature in GME weekly newsletter

-Resident champion promotions at departmental grand rounds

This occurred during our annual GME appreciation week, after which a post-survey mirroring the pre-survey was distributed to all trainees with two additional questions to evaluate perceived effectiveness.

### **Results/Outcomes/Improvements**

A total of 129 trainees replied to the pre-survey (9% of GME trainees at our institution), while 75 replied to the post-survey (5%). From pre- to post-survey, reported awareness of the Pebbles program increased from 24.6% to 64.0% ( $p<0.001$ ), knowing how to submit a pebble increased from 14.0% to 42.7% ( $p=0.012$ ), and knowing how follow-up is provided increased from 1.6% to 8.0% ( $p<0.001$ ).

Originally, pebbles submissions averaged 5.1 +/- 2.5 per week. After our campaign, there were 30 submissions for the first week, leveling off to 13 +/- 10 per week ( $p<0.001$ ). When asked if the program could improve wellness, the responses were as follows: very likely (4.1%), likely (19.2%), not very likely (32.9%), will not (9.6%), and unsure (34.2%).

Knowledge of the program came from the weekly GME newsletter (33.8%), peers (18.9%), GME week table (17.6%), badge distribution (10.8%), call room posters (8.1%), and MedHub, departmental Grand Rounds, and program newsletters (all  $<5.0\%$ ).

### **Significance/Implications/Relevance**

We found that a multi-pronged public awareness initiative to increase visibility and utilization of the Pebbles program was very successful. Trainees expressed lack of understanding with follow-up of submissions and skepticism for the efficacy of the Pebbles program to improve wellness. However, the program was not specifically designed to fix wellness, per se, rather it was to establish an ongoing partnership with trainees.

By mitigating individual and workplace stressors, institutions may positively impact the wellness of their trainees which can ultimately lead to better patient care. At our institution, the Pebbles initiative is one of many efforts to improve the workplace environment and there is ongoing work to close the loop between the GME office and the GME community regarding their concerns. Future work will include adding the mistreatment line to the survey and including an opportunity to submit praises for colleagues that will be published in the weekly newsletter.

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**Poster #42: Crucial Conversations Simulation for Chief Residents****Author(s):** Catherine Clark, MAT; Ryan Smith, DO; Elizabeth Torres, BA**Institution(s):** HCA Healthcare; Ascension Macomb Oakland Hospital**Abstract Type:** Innovation-focused**Background**

There is an increasingly evident need for chief residents to better develop the skill set of providing feedback to junior residents and to aid in establishing a program culture that includes more frequent, effective feedback. Currently, there is limited research on chief residents utilizing the ADAPT model for providing feedback and/or the SPIKES framework for crucial conversations and challenging feedback situations. Additionally, as an organization we currently have been cited 13 times in relation to providing adequate feedback.

**Objectives**

To report the outcomes of an experiential training program for developing chief residents' leadership abilities, particularly in the skill area of providing effective feedback.

**Methods**

Fifty-six chief residents attended a two-day in-person workshop. Specialties represented included anesthesiology, diagnostic radiology, emergency medicine, family medicine, general surgery, internal medicine, obstetrics and gynecology, and psychiatry. The content covered at the in-person workshop included autonomy supportive leadership and developing a program culture, exploring and enhancing emotional intelligence, navigating team dynamics, avoiding disruptors of teams, managing the struggling resident, developing and enhancing professional identity, and navigating crucial conversations. The simulation activity included breakout rooms of six to seven residents, who each practiced giving feedback to a standardized resident in a variety of different feedback situations, including academic integrity, clinical judgment, leadership communication, patient communication skills, professional development, professionalism, teamwork and collaboration, time management, and wellness.

**Results/Outcomes/Improvements**

Residents reported at the end of the workshop that a key takeaway from this workshop they would implement in future practice is the SPIKES framework for addressing challenging situations, and they reported that they had greater confidence in their communication skills particularly in difficult situations. After a mid-year check-in with residents a few months after the workshop, residents reported that they had actively initiated feedback more frequently and that the practice cases at the workshop helped to improve their communication skills at their programs.

**Significance/Implications/Relevance**

Participation in the two-day in-person course increased residents' confidence in their abilities to provide effective feedback to junior residents and to step into their leadership roles. Creating a psychologically safe space with a trained facilitator and peers from different programs provided an opportunity for chief residents to hone their communication skills in challenging situations, which is a critically important aspect of their leadership roles. There is value in offering dedicated time for chief residents to fine tune these skill sets, as this will pay dividends towards the success of all residents at their programs.

**Poster #43: Pharmacology: A Garden-Based Resident Elective in Well-Being and Nutrition**

**Author(s):** Denise Taylor, MS, RD; Elise Hogan, MD, MPH, FAAFP; Mark Mason, PhD, MEd, CGP; Katelyn Fritzges, MD, CCMS; Tabassum Salam, MD, MBA, FACP

**Institution(s):** ChristianaCare

**Abstract Type:** Innovation-focused

**Background**

In recent years, the ACGME Common Program Requirements were revised to include a more comprehensive approach to well-being that addresses psychological, emotional, and physical components essential toward fostering competent, caring, and resilient physicians. At the same time, there has been a movement toward the creation of hospital farms and focus on Food is Medicine initiatives in health care. Coupling the ideas of resident well-being and Food is Medicine, we leveraged a workforce development grant to fund a hospital garden that serves as an outdoor living, learning classroom for all employees, including our 300+ residents and fellows.

**Objectives**

To describe the creation of a garden-based resident elective in well-being and nutrition at a large, independent academic medical center.

**Methods**

We partnered with a local expert in hospital farms to design and build a 5,000-square-foot garden on campus. Key stakeholders included facilities, food and nutrition services, community health, and a primary care physician certified in culinary medicine. With dedicated support from the Chief Learning Officer and designated institutional official and leadership from a family medicine associate program director, we planned and piloted a two-week resident elective in the garden. Didactic topics include medicinal plants and healing, motivational interviewing, and culinary medicine. Off-site experiences include working at a local food bank/farm and joining community health workers in patients' homes. Hands-on education includes planting, weeding, watering, harvesting, and pest management. Each week culminates with residents accompanying the well-being specialist and the "wellbeing wagon" to share garden produce within the hospital. Open-ended feedback about the elective is collected via survey.

**Results/Outcomes/Improvements**

During the 2024 growing season, we piloted a two-week elective in the garden for five residents - one emergency medicine/family medicine, two internal medicine, and two family medicine residents. They harvested and distributed over 1,000 pounds of produce, including eggplant, tomatoes, peppers, various greens and herbs, melons, zucchini, green beans, beets, flowers, and developed recipe cards featuring the picked produce. Survey responses revealed high resident satisfaction with this novel approach to well-being. Qualitative feedback on the elective included gratitude for the opportunity to step away from clinical work and care for themselves through gardening and a deeper understanding of community nutrition resources available for patients. The enthusiasm around the resident elective spurred other garden activities, such as residency program meetings in the garden, garden tours during new resident and fellow orientation, and a resident council-sponsored event to close the garden for the season.

**Significance/Implications/Relevance**

With funding and supportive leadership, implementing a garden-based resident elective in well-

being and nutrition is feasible and well-received by residents. This novel approach to well-being exposes residents to nature, nutrition, experiential learning, and engagement with the community. Future plans include expanding the elective to support more residents and continuing to grow our community partners with a focus on social drivers of health. Ultimately, we plan to collaborate with other academic institutions to collect more robust data and outcomes with a multi-site study on the garden elective for residents and fellows.

## **Poster #44: Innovative Pilot Wellness Consult: Helping Training Programs Identify Well-Being Interventions**

**Author(s):** Jennifer Duncan, MD; Simone Bernstein, MD, MPHE; Raquel Cabral, PhD, CPH; Evan Schwarz, MD

**Institution(s):** Washington University; Uniformed Services University of the Health Sciences; Washington University, Department of Psychological & Brain Sciences; University of California Los Angeles

**Abstract Type:** Innovation-focused

### **Background**

The ACGME describes a commitment to the well-being of all individuals in the clinical learning environment, including trainees and faculty members. In 2017, the ACGME revised the Common Program Requirements for all programs to address well-being. Individual programs and institutions are charged with operationalizing these requirements. Interventions in the workplace have the potential to optimize both resident and faculty well-being. For example, faculty and residents can explore using the electronic health record and offloading clinical and non-clinical tasks to other health care team members. However, we know that interventions for well-being are unique to individual units or clinical work areas. In essence, wellness interventions are not a one-size-fits-all approach.

### **Objectives**

We aimed to develop an intervention through a one-time innovative wellness consultation program, coordinated through the institutional GME Wellness Program, to directly evaluate concerns at the individual program level and offer strategies to improve well-being across known driver domains for distress.

### **Methods**

A framework for wellness consults was developed using literature and input from faculty and trainees on the GME Learning Environment Subcommittee (LES). Consults were open to residency and fellowship programs at the Washington University in St. Louis/Barnes Jewish Hospital/St. Louis Children's Hospital GME consortium. We recommended that programs with over 30% of trainees with high distress scores on the Mayo Well-Being Index consider a wellness consult. The consults included three one-hour group interviews with program leadership, residents, and faculty. The Director of Wellness for GME, a GME counselor, and two other members of the LES moderated consults. Each program received personalized recommendations based on concerns from trainees and faculty. After receiving recommendations, participants completed a brief survey to assess their perceptions of the process. A follow-up survey was sent to program leaders nine to 12 months later to assess implementation.

### **Results/Outcomes/Improvements**

Since November 2022, we conducted four consults (three residencies, one fellowship). Recommendations were grouped into individual support, culture change, and workplace efficiency. A post-survey was completed by 30/55 participants (49% response): 12 program leaders (40%), 13 faculty (43%), and eight trainees (27%). Respondents agreed: consult topics were important (90%); the time spent worthwhile (73%); and they would recommend a consult to others (70%). Twenty-four respondents found the recommendations helpful (88%) and actionable (71%). All leaders intended to implement at least a few recommendations within the

year. Barriers to implementation included financial and staffing issues and insufficient time to plan initiatives. Respondents valued the format and external input. Suggestions for improvement included making consults mandatory, soliciting broader input, providing more implementation support, and having follow-up meetings. At follow-up, all program directors implemented at least one to two changes.

### **Significance/Implications/Relevance**

Moving beyond individual-focused interventions to making changes at the system level is necessary to address physician burnout. Using reviewers external to the program is a way for trainees and faculty to offer insights and recommendations about program-level system barriers to well-being in a non-judgmental space. Actionable changes take time, so the consultation process fulfilled the goal of gathering information so that individual programs can move forward with interventions. Institutions can use the wellness consult model to provide feedback to programs about opportunities to improve and expand wellness efforts. Given the positive feedback from this pilot initiative, we plan to encourage this consultation process for all programs. Continued follow-up and support of programs may elucidate common barriers to implementing wellness initiatives that guide efforts to advocate for institutional-level resources.

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## **Poster #45: Comparing Self-Perceived Well-Being Between Residents and Fellows Utilizing ACGME Survey Results**

**Author(s):** Wendy Kinzler, MD, FACOG; Andrew Polis, BS; Diana Savitzky, MD; Lakha Prasannan, MD; Kara Scalice, MD; Patricia Rekawek, MD

**Institution(s):** NYU Grossman Long Island School of Medicine

**Abstract Type:** Research-focused

### **Background**

Physician well-being plays a crucial role in ensuring safe patient care. Evidence suggests that trainee well-being and burnout differs across the medical education continuum (1), with high rates of burnout occurring during the intern year. Previous research at our institution demonstrated differences in wellness day utilization between residents and fellows (2), leading us to investigate other differences in well-being between these groups.

### **Objectives**

To determine if self-perceived well-being, as reported in the annual ACGME survey, differs between residents and fellows at a single Sponsoring Institution.

### **Methods**

De-identified and aggregated data from the annual ACGME Well-Being Survey for our mid-size Sponsoring Institution from the years 2019-2023 was used for analysis. Responses were categorized as coming from residents or fellows. For each survey item, the number and percent of participants who responded “strongly agree” or “agree” were calculated. Results for each survey item were compared between the two groups using a Chi square, with statistical significance set at  $P < 0.05$ .

### **Results/Outcomes/Improvements**

Results: Data was analyzed from 885 respondents from eight residency programs and 244 from nine fellowships. There were no differences between residents and fellows in overall satisfaction with their programs, as indicated by “very positive evaluation of the program” (62.2% v 66.4%,  $P=0.24$ ) and “would definitely choose this program again” (55.6% v 62.2%,  $P=0.1$ ) responses. Residents were less likely than fellows to respond that they had enough time to think and reflect (90.1% v 94.3%,  $P=0.04$ ). Residents were also more likely to feel emotionally drained at work (29.6% v 19.3%,  $P=0.001$ ), more likely to need more time to relax (42.9% v 35.7%,  $P=0.04$ ), and more likely to feel worn out and weary after work (36.8% v 27.5%,  $P=0.006$ ).

### **Significance/Implications/Relevance**

In comparing self-perceived well-being responses between residents and fellows utilizing the ACGME Surveys, residents appear to experience higher levels of emotional and physical strain compared to fellows. Specifically, residents report less time for reflection, more emotional exhaustion, and greater need for relaxation. These findings highlight the evolving well-being needs through the course of GME training, and initiatives should therefore be appropriately tailored based on PGY level.

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**Poster #46: Enhancing Psychiatry Residency Program Engagement and Satisfaction: A Targeted Intervention to Address Professionalism, Leadership, and Feedback Mechanisms**

**Author(s):** Meghan Oswald, DMD, MD; Sonia Kumar, DO; Jenna Taglienti, MD; Joanna Stanczak, MD; Gregory Haggerty, PhD

**Institution(s):** Zucker School of Medicine/Northwell Health at Mather Hospital

**Abstract Type:** Innovation-focused

**Background**

In response to suboptimal ACGME Survey results during the 2020-2021 academic year, the psychiatry residency program implemented substantial changes to enhance resident satisfaction, engagement, and overall program quality. The program scored below the national mean in key areas, including resources, professionalism, patient safety and teamwork, faculty teaching and supervision, evaluation, educational content, and diversity and inclusion. These findings underscored critical issues related to education, communication, feedback, professionalism, and attendings' accessibility, all of which contributed to resident burnout and dissatisfaction. Addressing these concerns through targeted interventions was essential to the program's success. By 2024, these efforts resulted in the program being recognized as one of the most improved within our health care system, which is among the largest graduate medical education providers in the country, overseeing 190 accredited and independent programs.

**Objectives**

The project aimed to enhance the quality and satisfaction of the psychiatry residency program by improving communication, encouraging a culture of bi-directional feedback, increasing the accessibility of attending physicians, and addressing professionalism. Ultimately, the goal was to restructure the program to foster resident engagement, psychological safety, and professionalism, while also creating a more transparent and responsive environment.

**Methods**

The project implemented:

Resident Progress and Feedback:

PD and APD conduct daily check-ins on resident progress and surveys

ACGME/OAA/internal surveys reviewed in forums and Program Evaluation Committee meetings

Action plans developed with resident input and shared transparently

Quarterly MedHub surveys reviewed, themes escalated if needed

24/7 virtual suggestion box for anonymous feedback

Faculty and Resident Leadership:

Faculty development sessions on feedback held annually



Created early leadership experience with resident-selected Peer Reps and Jr. Chief resident roles to set goals and track progress

Chief resident selection involves resident/faculty votes

#### Program Culture and Professionalism:

Policies revised to clarify roles and responsibilities

Open feedback culture with zero tolerance for retaliation

Professionalism lapses addressed by program director/Chair immediately

#### Learning and Mentorship:

Students involvement fosters resident leadership

Residents in recruitment feel more invested in program

#### **Results/Outcomes/Improvements**

As a result of these changes, the program saw a significant shift in resident satisfaction and program performance. Resident engagement increased due to more accessible leadership, transparent communication, and structured feedback processes. These efforts culminated in the program being recognized in 2024 as one of the most improved within the health care system. Faculty and resident collaboration fostered a more cohesive and supportive environment, and professionalism issues were addressed promptly and transparently.

#### **Significance/Implications/Relevance**

The success of these interventions demonstrates the impact of leadership accessibility, transparent communication, and a culture of psychological safety on residency program improvement. This project serves as a model for other residency programs facing similar challenges, offering scalable solutions for enhancing resident satisfaction and performance through structured feedback and active collaboration. By involving residents directly in decision-making and program development, this approach may reduce burnout and promote long-term engagement in medical training.

## **Poster #47: Resident-as-Teacher: Improving E-Learning Modules Utilizing Instructional Design and Interactive Technology**

**Author(s):** Anna Rueda, MD; Stephanie Sherman, MD; Sherita Love, PhD; Glennroy Bridges, MEd; Wesley Mayer, MD; Mark Harbott, MD, MHA; Teri Turner, MD, MPH, MEd; Bani Ratan, MD, EdD

**Institution(s):** Baylor College of Medicine; Center for Teaching and eLearning; Baylor College of Education

**Abstract Type:** Innovation-focused

### **Background**

It is imperative that resident physicians are prepared for their teaching and supervisory roles. Many institutions fulfill these requirements with Resident as Teacher (RAT) educational programs (1). However, these programs are often specialty-specific, and there are only a small number of studies that discuss the learning theories and models used in RAT programs or resident perceptions of which RAT topics are the most effective (2). Online modules can be effective educational tools that are accessible, engaging, reproducible, and sustainable to reach all residents (3). In a large academic medical institution with a variety of residency programs, the design and implementation of an institution-wide RAT e-learning module can be challenging due to the depth and breadth of the material that need to reach a large, diverse audience of resident physicians.

### **Objectives**

Our goal was to use contemporary concepts in medical education and an evidence-based instructional design model (PICRAT) to implement and evaluate the acceptability of three RAT modules, each focusing on a different level of learner (PGY-1, PGY-2, and PGY-3) (4). Additionally, we compared the resident learners' feedback on the new (2023-2024) e-modules to the previously developed institutional RAT modules (2019-2020). Our primary outcome was improving relevance of the modules to the role of resident teacher. Secondary outcomes studied were specialty-specific acceptance, content areas and e-module features most liked, and areas for improvement. This study was performed at a large academic medical institution with 24 accredited PGY-1-3 residencies, containing approximately 850 PGY-1-3 residents across specialties per year.

### **Methods**

From May-December 2023, the PGY-1 module was updated based on feedback from a pilot and the PGY-2 and PGY-3 modules were created (5). Each module covered similar content to the original modules, yet used the PICRAT model to incorporate interactive components (4). Resident video testimonials, multiple choice questions, matching exercises, and improved visual models of teaching concepts were used to enhance the experience. The modules were assessed by completion rates, Likert ratings and answers to two open-ended questions. Descriptive statistics were calculated and unpaired t-test was used to compare the Likert scores between the 2019-2020 and 2023-2024 modules. One-way ANOVA with Sidak's correction for multiple comparisons was used to compare Likert ratings of individual specialties to all specialties for the 2023-2024 modules. The responses to open-ended questions were evaluated using thematic analysis.

### **Results/Outcomes/Improvements**

The mandatory modules had a 100% completion rate in 2019-2020 (265 PGY-1s, 276 PGY-2s,

and 286 PGY-3s) and 2023-2024 (284 PGY-1s, 284 PGY-2s, and 279 PGY-1s). Evaluation response rate ranged from 88.6% to 97.1% in 2019-2020 and 98.6% to 99.3% in 2023-2024. Relevance to role as teacher improved significantly for each PGY level (improvements ranging from 0.68–0.98; 5-point Likert scale;  $p < 0.01$ ). In comparing specialties amongst the same PGY for the 2023-2024 modules, only PGY-3 radiology ratings were significantly lower ( $3.00 \pm 1.04$  vs.  $3.94 \pm 1.02$ ,  $p < 0.01$ , 95% CI 0.13-1.74) compared to all specialties. Open-ended comments revealed that residents liked the teaching strategies and efficient delivery, with the concepts of coaching, one-minute preceptor, and RIME (Reporter-Interpreter-Manager-Educator) noted as most relevant by PGY-1, PGY-2, and PGY-3 learners, respectively. Common themes for improvement were that no changes were needed or to add more content, such as teaching challenges.

### Significance/Implications/Relevance

The use of interactive methods improved the relevance of RAT e-modules across all PGY levels. High-yield, bite-sized teaching methods, such as one-minute preceptor, were most often liked by residents in this instructional format (6). Despite the improvements in content delivery, the relevance to role as teacher was more disparate at the PGY-3 level. Although there may be some basic concepts that all PGY-1 and PGY-2 resident physicians need, as trainees progress further in their careers, specialty-specific strategies may be more beneficial. The next steps for improvement of these modules are to add subspecialty-specific cases, videos with medical student perspectives, and more challenging teaching examples. While this study does not evaluate behavior change, skill acquisition, or maintenance of knowledge of the residents who have completed these modules, it does provide a model to disseminate important teaching concepts to all residents at an institution.

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## **Poster #48: Illuminating Resident Wellness with Workroom Lightbox Therapy: Evidence and Insights**

**Author(s):** Dipti Chrastka, LMFT; Mackenzie Holmberg, MD; Connor Fling, MD; Jennifer Best, MD

**Institution(s):** University of Washington; University of Washington School of Medicine

**Abstract Type:** Innovation-focused

### **Background**

Seattle's "Big Dark" (October through February) is long and rainy, with average sunshine of 1.5 hours daily. Faster loss of sunlight than in any other contiguous US city increases the prevalence of seasonal affective disorder (SAD). Trainees work long, variable hours and shifts, with disproportionate numbers of junior trainees situated in confined and poorly lit spaces. Common themes discussed with institutional wellness counselors include sleep disruption, heavy workload, fatigue, and burnout. Low levels of sunlight exacerbate these metrics of well-being contributing to burnout, currently rated high at our Sponsoring Institution against national survey data. Exposure to early morning bright light at 10,000 lux can result in substantial improvement by counteracting sleep deprivation effects and improving sustained attention. Light from light boxes helps produce Vitamin D, improving mood, sleep cycles, circadian rhythms, feelings of well-being, and happiness.

### **Objectives**

To determine if exposure to bright lightboxes in dimly lit work rooms can have a positive impact on resident well-being as measured by a decrease in reported fatigue and distress, improvement in mood and concentration, using quantitative and qualitative metrics. This can be very effective to counter the effects of SAD- and non-SAD-related distress in medical residents who work long hours, and in turn, contribute to a more conducive learning environment as a system level change to reduce fatigue and overall burnout.

### **Methods**

Beginning in November 2023, key GME program directors and administrators participated in initial data collection for this pilot project by identifying all windowless workrooms in the hospital that would benefit from lightboxes. The Chief of Medicine and chief medicine residents identified two team rooms at a single primary inpatient site with minimal natural light. Lightboxes (10,000 lux in strength) were installed on resident desks in these rooms with clear instructions. Residents exposed to lightboxes (30 minutes before 8:00 a.m.) between December 2023 and May 2024 were asked to voluntarily complete a pre- and post-test (Profile of Mood States POMS 2) to assess transient feelings and moods. Qualitative comments from residents were solicited and documented in notebooks. The project was overseen by a chief resident who shared results with the wellness team.

### **Results/Outcomes/Improvements**

The pilot project implementation was associated with a decrease in self-rated distress as reported in pre- and post-exposure POMS 2 by residents exposed to lightboxes over the pilot period of five months. There was reduced fatigue and reported distress, and improved mood. Residents experienced light from the lightboxes for a minimum of 30 minutes each day. Favorable qualitative comments were also documented and shared with the chief resident. Based on data supporting positive experiences of the residents, there was a request to install additional lightboxes in another team room. This program will continue through winter 2024-

2025 in three team rooms.

**Significance/Implications/Relevance**

Our findings align with prior research (eight randomized controlled trials in treating symptoms of SAD), including the work done on medical students who benefitted from Bright Light Therapy (Albany Medical College). Concentration increased and many reported enhanced mood. We are advocating for expanding this project to cover other hospital sites, including the sites identified in the initial phase of the project. Adding lightboxes in windowless spaces in low light spaces is a relatively low-cost, highly feasible method for enhancing objective and subjective resident well-being.

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**Poster #49: Familiarity and Engagement with the ACGME Milestones Supplemental Guide: Insights from GME Faculty and Trainees**

**Author(s):** Reid Evans, PhD; Jennifer Kodela, DO; Emily Green, PhD

**Institution(s):** University of Massachusetts Chan Medical School

**Abstract Type:** Research-focused

**Background**

When tasked with the development of Milestones 2.0, the ACGME addressed several emerging areas of concern regarding the implementation of the existing Milestones. Of particular concern, the language within the Milestones was suggested to be overly complex, resulting in descriptions of developmental levels that were potentially unclear or easily misunderstood. In response, Milestone complexity was reduced by removing lengthy descriptions and footnotes. The ACGME also introduced the Milestones Supplemental Guides as companion documents providing further description of each Milestone. The Supplemental Guides aim to enhance competency-based training in resident and fellow education by clarifying existing Milestones through subcompetency descriptions, behavioral examples, assessment tools, and resources. However, given the novelty of these tools, their actual implementation in graduate medical education (GME) is not well understood.

**Objectives**

1. To determine faculty, resident, and fellow familiarity with the Milestones Supplemental Guides.
2. To determine the extent to which faculty have implemented the Milestones Supplemental Guides in their assessment of learners.
3. To determine the extent to which residents and fellows have engaged with the Milestones Supplemental Guides in refining their individualized learning plans.
4. To determine the training and support that have been provided to educators and learners regarding these resources.
5. To examine faculty, resident, and fellow perceptions of the Milestones Supplemental Guides and their utility in GME.

**Methods**

In September of 2023, we conducted an institutional survey of GME faculty and trainees to examine both familiarity with the Supplemental Guides, as well as the ways in which faculty and trainees engage with these tools in residency and fellowship. We developed two surveys—one for faculty, one for trainees—including questions regarding familiarity, engagement behaviors, and faculty perceptions of the utility of the supplemental guides. Surveys were validated via cognitive interviews prior to distribution. We conducted regression analyses to determine differences in responses based on faculty roles (e.g., program director/associate program director, member of the Clinical Competency Committee) and post-graduate year for residents and fellows, and for predictors of engagement behaviors.

**Results/Outcomes/Improvements**

Eighty faculty physicians (15.8%) and 97 residents and fellows (15%) responded to our survey.

Faculty reported greater familiarity with the guides than trainees, yet use of the guide to support trainee education, provide detailed feedback to learners, and prompt self-reflection as the ACGME intended, was limited. Program directors/associate program directors reported the greatest awareness of the guides, and mention of the Supplemental Guide in trainees' biannual review was associated with an increase in engagement behaviors on behalf of the trainees. Most faculty were unable to evaluate the utility of the guides, likely due to unfamiliarity with the tool. Trainees reported limited awareness and/or engagement with the guides with 83% of residents and fellows suggested that they had not consulted the Supplemental Guide in the past year.

**Significance/Implications/Relevance**

As the ACGME is currently planning an intensive review of the current Milestones platform, a more nuanced understanding of how the Supplemental Guides have been implemented within residency and fellowship training is particularly timely as any review should be informed by data from real-world implementation. Our survey results suggest that familiarity with the supplemental guides is still somewhat restricted, particularly for residents and fellows, leading to limited engagement with these tools as originally intended. Moving forward, these results will inform professional development opportunities in which faculty and trainees are exposed to the Milestones Supplemental Guides and instructed on best practices so that they may engage with the guides as intended.

## **Poster #50: Different Letters, Same Results: A Comparison of Milestones Among Allopathic and Osteopathic Residency Trainees**

**Author(s):** Melissa Langhan, MD, MHS; Thuy Ngo, DO; Jo-Ann Nesiama, MD; Kenji Yamazaki, PhD; Lorenzo Pence, DO; Sean Hogan, PhD

**Institution(s):** Yale School of Medicine; Johns Hopkins University School of Medicine; UT Southwestern/ Children's Medical Center; Accreditation Council for Graduate Medical Education

**Abstract Type:** Research-focused

### **Background**

Despite a large proportion of osteopathic graduates (DOs) and equality in accreditation processes, allopathic physicians (MDs) may be unfamiliar with osteopathic medical training. There is a lack of evidence that competency assessments of DO residents differ from those of MD trainees. Unfounded concerns about the differences in medical training pathways between DO and MD students may lead to a bias against DO applicants by program directors and selection committees who are screening potential applicants for entry into their residency or fellowship training programs. This bias can negatively impact access and acceptance into certain programs, with several competitive specialties matching <1% of DO applicants. This disparity may unwillingly drive DO students into specialties that are more likely to accept DO trainees. The potential for disparate treatment could have substantial implications for the health care workforce.

### **Objectives**

The purpose of this study is to compare Milestones assessments across ACGME competencies (Patient Care [PC], Medical Knowledge [MK], Practice-based Learning and Improvement [PBLI], Interpersonal and Communication Skills [ICS], Professionalism [PROF], and Systems-based Practice [SBP]) of residents who attended US allopathic versus osteopathic medical schools. We hypothesize that trainees who have graduated from osteopathic programs achieve similar Milestones scores across all six ACGME domains of competency when compared to trainees who have graduated from allopathic programs.

### **Methods**

Using specialties that historically matched >9% DO residents, we analyzed Milestones scores of residents in three-year programs: family medicine, internal medicine, pediatrics; and three-year emergency medicine. We excluded residents who graduated from international medical schools and programs that exclusively had either DO- or MD-trained residents to control for potentially confounding effects. We extracted Milestones data for two cohorts of categorical residents who entered training in July 2016 (2016 cohort) and July 2017 (2017 cohort). These cohorts were chosen to avoid the effects of the COVID-19 pandemic and to use a single assessment instrument, Milestones 1.0. Milestones scores were compared at the initial and penultimate assessment periods. For each competency domain, by specialty separately, we applied a generalized estimating equations model to account for the correlation among Milestonea ratings repeated over time for each resident nested within a training program.

### **Results/Outcomes/Improvements**

Among 13,544 eligible residents, 31% were DO graduates. On initial assessment in the 2016 cohort, DOs had lower Milestones means than MDs in eight areas: Family Medicine MK; Internal Medicine MK, SBP, PBLI, and ICS; Pediatrics PC, SBP and PROF. DOs had higher Milestones means than MDs in two areas: Emergency Medicine PC and SBP. By the



penultimate assessment, DOs had lower Milestones means than MDs in only three areas: Pediatrics PC, MK and SBP; and higher Milestone means in all six areas for Emergency Medicine. On initial assessment in the 2017 cohort, DOs had lower Milestones means than MDs in seven areas: Family Medicine MK; Internal Medicine PC, MK, SBP, PBLI, PROF, and ICS. DOs had higher Milestones means than MDs in one area: Emergency Medicine MK. By the penultimate assessment, the only significant differences were lower Milestones scores for DOs in Family Medicine MK and PBLI. The absolute value of the differences in Milestones means ranged from 0.05 to 0.12.

### **Significance/Implications/Relevance**

This is the first study to comprehensively evaluate the learning trajectories and Milestones assessments of DO and MD residents across four specialties. Trainees graduating from either osteopathic or allopathic schools have similar Milestones scores by the end of residency. There were some statistically significant differences that favored either MDs or DOs across our analyses, with the largest difference measuring 0.12 points. Given that Milestones are measured in 0.5-unit increments and prior studies deemed similar differences as not educationally significant, the overall differences in assessment that we found are not likely to be meaningful. Program directors and selection committees should assess applicants from these different accreditation paths who are seeking entry into their residency programs in an equitable manner. With many specialties concerned about their future workforce, increasing the availability of residency training programs to DO graduates may be beneficial to all.

**Poster #51: The Transition to Residency Risk Index (TRRI): Distribution of 1,430 Residents and Psychological Correlates of TRRI Scores**

**Author(s):** Alexander Marshburn, MA; Sabrina Menezes, MA; Gregory Guldner, MD, MS; Jason T. Siegel, PhD

**Institution(s):** Claremont Graduate University; HCA Healthcare

**Abstract Type:** Research-focused

**Background**

Research indicates that the first three months of residency are a time of high risk for physicians (1). When transitioning into residency, physicians may experience upsetting shifts in their professional or personal lives that can reduce their well-being. In an effort to create a brief, anonymous instrument to measure risk during transition, the nine-item Transition to Residency Risk Index (TRRI) was developed to quickly measure incoming residents' level of transitional stress to better direct well-being resources (2,3). Despite its potential utility, the TRRI has not yet been widely utilized, and little is known about the relationship between TRRI and other psychological variables. The current study reports correlational data from two large groups of incoming medical residents (Study 1a,  $n = 683$ ; Study 1b,  $n = 747$ ) to determine where they fall on the TRRI measure, as well as how these scores relate to psychological stress and well-being.

**Objectives**

Given that residents bring different needs into residency based on personal and institutional experiences prior to residency (3), we aimed to learn the distribution of residents regarding their transition risk and to learn how transition risk relates to residents' psychological profiles. Data from over 1,500 incoming residents were collected to understand where they fall on the TRRI's three risk levels. We sought to learn the extent to which scores on the TRRI were associated with levels of anxiety, depression, professional fulfillment, burnout, and growth mindset among participants in Study 1a. Study 1b replicated these analyses and expanded them by including additional theoretically related measures (i.e., psychological safety, hidden curriculum, and maladaptive perfectionism). Overall, we sought to assess how scores on this brief, nine-item index relate to residents' psychological profile directly before they begin their residency.

**Methods**

Data for the current study were collected from June 1, 2024 until June 27, 2024. Resident orientation began on June 28, 2024. Of the 1,885 incoming residents, 1,500 filled out the survey (80% response rate). In Study 1a, residents ( $n = 683$ ) filled out the TRRI and measures of depression (PHQ-9) (4), anxiety (DASS) (5), and professional fulfillment/burnout (PFI) (6). In Study 1b residents ( $n = 747$ ) also filled out the same measures as Study 1a, as well as maladaptive perfectionism (SAPS) (7), psychological safety (8), and hidden curriculum (9).

**Results/Outcomes/Improvements**

In Study 1a residents' risk of difficult transition was 46.1% low, 31.6% moderate, and 22.3% high. Due to the large sample size,  $p < .01$  was used to determine the significance of findings for correlational analyses. Higher TRRI was significantly ( $p < .01$ ) associated with residents' anxiety ( $r = .23$ ), depression ( $r = .46$ ), burnout ( $r = .22$ ), and professional fulfillment ( $r = -.22$ ) among incoming residents. Study 1b residents' risk of difficult transition was 46.5% low, 31.1% moderate, and 22.5% high. Study 1b's within-sample replication saw comparable results, with higher TRRI also significantly ( $p < .01$ ) associated with anxiety ( $r = .30$ ), depression ( $r = .44$ ),

burnout ( $r = .29$ ), and professional fulfillment ( $r = -.23$ ). Furthermore, TRRI was significantly ( $p < .01$ ) associated with maladaptive perfectionism ( $r = .19$ ), psychological safety ( $r = -.15$ ) and hidden curriculum ( $r = .21$ ). TRRI was not significantly related to growth mindset in either study (1a  $r = .06$ ; 1b  $r = .07$ ).

### Significance/Implications/Relevance

The findings of this study indicate that residents scoring higher on the TRRI are more depressed, more anxious, and experience more burnout. They are less professionally fulfilled, more prone to maladaptive perfectionism, and have been negatively impacted by prior institutional experiences (e.g., hidden curriculum and lack of psychological safety). Associations between these factors and the TRRI highlight its predictive utility. Taken together, the TRRI has value as a screening instrument in its ability to determine the extent to which incoming residents are at risk of experiencing transitional stress at a point in their career where they are critically vulnerable (1) By implementing this short, nine-item index at the start of residency, programs may be able to better understand which residents are in need of resources and supports necessary to ease their transition into residency (2).

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Curriculum on Resident Burnout and Cynicism. *Journal of Graduate Medical Education*. 2011;3(4):503-510. doi:10.4300/JGME-D-11-00044.1

**Poster #52: Validating the ACGME's Clinician Educator Milestones**

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**Institution(s):** Johns Hopkins School of Medicine

**Abstract Type:** Research-focused

**Background**

Documenting achievement and measuring progress as a clinical educator is challenging. Competency-based medical education (CBME) emerged in the 1990s to ensure medical professionals gain skills and knowledge for quality patient care. CBME emphasizes achieving specific competencies through continuous qualitative and quantitative assessments, often including Milestones, and is primarily used to track trainee progress. Milestones serve as benchmarks for trainees' development, guiding their formation into medical professionals. While Milestones are extensively used for trainees, few tools assess educators. To address this, the ACGME, with the ACCME, Association of American Medical Colleges, and American Association of Colleges of Osteopathic Medicine, introduced the Clinician Educator Milestones in 2022. This tool includes five core competencies: universal pillars; administration; diversity, equity, and inclusion in the learning environment; educational theory; and well-being, split into 20 sub-competencies, and was designed for clinician self-assessment.

**Objectives**

Since the release of these Milestones, there has been little research describing or validating their use as a self-assessment tool for clinical educators. To address this gap, we aimed to validate the capacity of the Clinician Educator Milestones to distinguish strong clinical educators. Our primary research question was whether self-evaluation with the Clinician Educator Milestones differs between those who have been recognized as exemplary clinician educators and those whose academic careers have emphasized different aspects of scholarship. We also aimed to examine whether self-evaluations differed based on respondents' gender, race, and ethnicity. With this study we hope to offer insight into the validity and applicability of the Clinician Educator Milestones.

**Methods**

The study cohort consisted of clinician educators at a single institution who were nominated for institutional educator awards between 2012 and 2023 ("nominees"). The nominees were compared with a control group of faculty of similar rank but whose careers were not primarily focused on education and who were identified as peers by the nominees. Both groups self-assessed using the Clinician Educator Milestones. We compared responses between the groups using Wilcoxon rank-sum tests to assess differences in self-evaluation across the 20 subcompetencies defined by the Milestones. We also compared responses in the 20 subcompetencies between respondents of different gender, race, and ethnicity.

**Results/Outcomes/Improvements**

Of the 85 award nominees identified, 71 (84%) completed the survey, while 91 (66%) of the 138 control individuals completed the survey. Award nominees consistently rated themselves higher across the Milestones' subcompetencies compared to the control group, with significant differences observed in 18 of the 20 subcompetencies ( $p < 0.025$ ). Notably, the groups did not differ significantly in their assessment of Commitment to Professional Responsibilities ( $p = 0.432$ ) or Leadership Skills ( $p = 0.064$ ). Respondents identifying as Black rated themselves

higher in Diversity, Equity, and Inclusion compared to other racial groups ( $p = 0.003$ ).

**Significance/Implications/Relevance**

This study validates the Clinician Educator Milestones, demonstrating their ability to distinguish recognized clinical educators from similarly accomplished faculty who have pursued career tracks that are not primarily focused on education and educational scholarship. Award nominees consistently rated themselves higher in 18 of the 20 subcompetencies, supporting the Milestones' effectiveness in identifying stronger educators. Responses showed few differences based on demographic characteristics. This study successfully links the Milestones' performance with an external measure of educational skill. These results emphasize the Milestones' relevance for self-assessment and development, providing educators with a structured framework to reflect on and improve their teaching skills. Further studies should test the Milestones in additional settings, and compare them to other metrics of clinical teaching skill.

**Poster #53: Medical School's Influence: How do Medical School Experiences Impact Perceptions of Stigma and Help-Seeking for Depression Among Incoming Residents?**

**Author(s):** Sabrina Menezes, MA; Kelsey Carpenter, MPH; Jessica Diaz, PhD; Gregory Guldner, MD, MS; Jason T. Siegel, PhD

**Institution(s):** Claremont Graduate University; HCA Healthcare

**Abstract Type:** Research-focused

**Background**

Research has often explored factors within residency that influence well-being, and interventions have been conducted to increase resident wellness (1). However, limited research has focused on how medical school experiences impact residents' well-being (2, 3). Highlighting the importance of such research, a recent study by Carpenter and colleagues (4) found that perceptions of lower psychological safety and greater perceptions of a harmful hidden curriculum in medical school were associated with higher levels of imposter phenomena among incoming resident physicians. Additionally, lower psychological safety in medical school was associated with lower levels of meaning in work. These data highlighted how medical school influences incoming residents in ways that might not often be considered. The data also illustrate the utility of knowing about residents' medical school experiences to understand their psychological profile at the start of residency.

**Objectives**

The current study expanded upon Carpenter and colleagues' (4) investigation, which indicated that psychological safety and harmful hidden curriculum in medical schools impacted incoming residents' imposter phenomena and well-being. We did so by exploring whether these same medical school constructs (i.e., psychological safety and hidden curriculum) are associated with stigmatizing beliefs and help-seeking intentions for depression in those entering residency. This study also examined whether stigma mediates the relationship between medical school experiences and help-seeking intentions for depression. Such information is critical as it could identify the incoming residents most in need of intervention and help explain why some residents with depression are less willing to seek help. These data could also further highlight the extent to which medical school influences incoming residents in more ways than often considered.

**Methods**

This study used a cross-sectional design to explore the relationships between medical school experiences and incoming residents' perceptions of help seeking for depression and help-seeking intentions. It was part of a more extensive data collection of incoming residents of the 2023-2024 school year that began in June 2023 and ended in July 2023. An anonymous survey built on Qualtrics was emailed to 1,777 incoming residents and 1,644 responded (response rate = 92.52%), though participants were randomly assigned to different survey paths. The total sample for this study was 262 incoming residents, though data cleaning brought the final sample to 241 participants. To ensure that the results were not due to an overall negative bias, we assessed all relationships over and above current levels of depressive symptomatology.

**Results/Outcomes/Improvements**

Over and above current levels of depressive symptomatology, psychological safety in medical school had a significant indirect effect on help-seeking intentions for incoming residents through personal stigma ( $\beta = .06$ ,  $p = .011$ ), perceived stigma ( $\beta = .08$ ,  $p = .003$ ), and perceived career

consequences ( $\beta = .06$ ,  $p = .009$ ). Moreover, a harmful hidden curriculum in medical school had a significant indirect effect on intentions to seek help in incoming residents through perceived career consequences ( $\beta = -.05$ ,  $p = .040$ ) but not personal ( $\beta = -.01$ ,  $p = .746$ ) or perceived stigma ( $\beta = -.04$ ,  $p = .099$ ). In summary, the positive relationship between psychological safety and help-seeking intentions can be explained, in part, by the lower levels of perceived stigma, personal stigma, and perceived career consequences, while the negative relationship between hidden curriculum and help-seeking intentions is explained solely by perceived career consequences.

### **Significance/Implications/Relevance**

This research represents the second study where perceptions of psychological safety and a harmful hidden curriculum in medical school were associated with outcomes that can impact the extent to which residents thrive. Together with Carpenter and colleagues' study (4), these data offer strong evidence that medical school influences the psychological well-being of students, which extends into residency. It also suggests that resident programs can assess perceptions of the medical school experience as an indirect way to learn about the incoming residents and their needs. Given these findings, medical schools should carefully consider the psychological safety of their learning environment and harmful informal lessons perpetuated to students. Likewise, it would be beneficial for residency programs to assess their incoming trainees' perceptions of these particular medical school experiences to identify those who are need of greater assistance at the start of their residency.

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**Poster #54: Country Socioeconomic and Population Characteristics in Relation to the Distribution of International Medical Graduates in the US Health Care Workforce****Author(s):** Shiyao Yuan, MS, MEd; Amy Opalek, PhD**Institution(s):** Intealth**Abstract Type:** Research-focused**Background**

International medical graduates (IMGs) constitute a significant proportion of the US health care workforce. IMGs play a crucial role in providing health care in rural and underserved communities. Prior research has found that IMGs tend to serve in health professional shortage areas (HPSAs) and medically underserved areas (MUAs), particularly in the primary care roles (Duvivier et al. 2019; Malayala et al. 2021). In addition, IMGs bring cultural and linguistic diversity that can be beneficial in treating diverse patient populations. IMGs are more likely to serve immigrant populations, racial minorities, and patients with limited English proficiency (Kaushal et al. 2022). These groups often experience barriers to accessing care, and IMGs may be better equipped to address these challenges through shared cultural backgrounds and/or language skills.

**Objectives**

The purpose of this research study is to compare the socioeconomic and population characteristics of US counties by IMG share in the non-federal primary care health care workforce.

**Methods**

In this cross-sectional descriptive study, we explored variations in socioeconomic and population characteristics of US counties by proportion of IMGs in the non-federal primary care health care workforce, using data from the Area Health Resources Files (AHRF) 2022-2023 county-level data. AHRF provides comprehensive information in health care professions, population characteristics, and socioeconomics. We stratify counties into three distinct groups based on their IMG shares in the physician workforce: (1) counties with IMG shares below the national average (%IMG < 20%) (group 1); (2) counties with IMG shares near the national average (%IMG between 20% and 30%) (group 2); and (3) counties with IMG shares exceeding the national average (%IMG > 30%) (group 3). We compared these groups to explore county characteristics such as median household income, poverty rates, unemployment rates, and the percentage of residents who are non-English speakers or belong to minority populations.

**Results/Outcomes/Improvements**

There were a total of 3,075 US counties included in the study, among which 1,913 counties were in group 1, 553 counties were in group 2 and 609 counties were in group 3. Our analyses show that compared to the other two groups, counties in group 3 (higher than national average proportion of IMG physicians) were more likely to be socioeconomically disadvantaged. To be specific, these counties tend to have 1) lower median home value, 2) higher poverty rate, 3) higher proportion of non-native English speakers, 4) larger foreign-born population, 5) greater proportion of Black and/or Hispanic populations, 6) lower proportion of college graduates, 7) higher proportion of population having not completed high school education.

**Significance/Implications/Relevance**

The study findings indicate that IMGs in the primary care workforce continue to serve in more

underserved and disadvantaged areas, and IMGs are still more prevalent in areas with large minority and immigrant communities. This highlights the role IMGs play in providing health care to populations that may face linguistic, cultural, or economic barriers in accessing care. The reliance on IMGs in these areas underscores their crucial role in providing care in socioeconomically disadvantaged and diverse communities. The findings also emphasize the need for strategic workforce policies to continue supporting IMGs to ensure satisfactory health care provision.

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**Poster #55: Empowering Resident Autonomy, Competence, and Relatedness Through Opt-Out Visits**

**Author(s):** Emily Lisco, MD; Alexandra Hughes, MSW; Meghan O'Meara, MA

**Institution(s):** Thomas Jefferson University Hospital

**Abstract Type:** Innovation-focused

**Background**

Self-determination theory posits that individuals' well-being can be enhanced or undermined depending on whether the core psychological needs of autonomy, competence, and relatedness are met. The stress of the transition to residency and the lack of autonomy, competence, and connection felt by residents can lead to new or worsening depression, anxiety, and burnout among housestaff. The ACGME Common Program Requirements emphasize the importance of well-being in residency programs, including the opportunity to attend health care appointments during working hours.

Opt-out well-being assessments have been used to target residents to increase help-seeking and provide low-barrier access to preventative mental health care. Offering opt-out visits meets ACGME requirements and improves the mental well-being of residents by enhancing their autonomy, competence, and connection to support. Opt-out programs are a low-cost, meaningful addition to residents' medical training.

**Objectives**

The primary goal of proactive wellness check-ins is to identify residents struggling with their mental health and immediately schedule intake appointments with a mental health professional. The secondary goal is to encourage residents to reflect on their individual signs of burnout and develop an action plan to enhance well-being throughout residency. Feedback solicited through surveys is meant to help the program grow and serve residents in the most meaningful way possible.

**Methods**

Residents were scheduled for a one-on-one, virtual, 30-minute wellness check-in. They had the choice to opt-out or attend. Before the check-in, they were asked to complete a consent form and PHQ-9. The visits were structured to be uniform for all attendees, with room for personalized conversation. The structure was modeled off safety planning templates. During the visit, residents were asked to reflect on their own signs of burnout, coping skills, supports, and when to seek professional help. They were encouraged to ask questions about accessing care and any perceived barriers. During the check-in, residents could choose to schedule an intake appointment with an in-house mental health professional. Afterward, all residents, regardless of visit participation, received a voluntary survey and details on accessing wellness resources.

**Results/Outcomes/Improvements**

The number of opt-out visits attended and intake appointments scheduled were tracked. Scheduled intakes were considered a positive sign that residents were engaging in help-seeking behavior. Survey responses provided additional feedback.

AY21 included residents from internal medicine and neurology. Sixty-one percent (46/76) opted in. Of those, 24% (11/46) scheduled an intake. Eight residents responded to the survey. Five strongly agreed and two agreed that the check-in was helpful. Seven said they would

recommend it to peers.

AY22 included residents from psychiatry, internal medicine, neurology, general surgery, emergency medicine, family medicine, and pediatrics. Thirty-two percent (118/369) opted in. Of those, 34% (40/118) scheduled an intake. Forty-three residents responded to the survey. Twenty-six strongly agreed and nine agreed that the check-in was helpful. Thirty-eight said they would recommend it to peers. Survey comments in both years encouraged expanding the program, noting the visit was helpful and removed barriers to accessing care.

### **Significance/Implications/Relevance**

After the first year of the free pilot, residency programs decided to pay for their residents to continue to receive opt-out visits. This decision was based on reported benefits and positive feedback from participants. Self-determination theory provides a lens to understand the success of the program. Specifically, residents appreciated the autonomy and choice afforded by the opt-out model, fostering a sense of agency in their well-being. The program's emphasis on personalized support and low-barrier access to intake appointments aligned with residents' desire for competence and relatedness. This approach fostered a culture of help-seeking, and increased the utilization of mental health services by residents. This low-cost intervention can be implemented by all institutions to meaningfully enhance resident well-being.

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## **Poster #56: Resident Well-Being: Cultivating an Experiential Communication Paradigm in GME**

**Author(s):** Cory Gerwe, PhD; Agatha Parks-Savage, PhD; LaConda Fanning, PsyD

**Institution(s):** Old Dominion University

**Abstract Type:** Innovation-focused

### **Background**

Resident well-being is a crucial aspect of graduate medical education (GME), with increasing emphasis on the role of leadership and communication skills in promoting it. Physician residents consistently face well-documented stressors that adversely affect both their professional performance and personal health (Mirzaei et al., 2023). This project applies John Dewey's experiential learning theory to teach residents leadership and communication skills, aimed at improving well-being and effectiveness. Structured programs like "Resident as Chief" and "Support U - Peer Support" provide sustainable frameworks to address common stressors. Studies have demonstrated that experiential learning in leadership enhances both resident wellness and professional development (Chung et al., 2021; Dyrbye et al., 2020). This project seeks to replicate these positive outcomes in GME through structured, experiential interventions.

### **Objectives**

By the end of this poster session, participants will be able to:

- Discuss the importance of resident wellness and identify common stressors faced by physician residents.
- Demonstrate effective leadership skills through the application of experiential learning methods, particularly in conflict resolution and communication.
- Develop actionable plans for integrating leadership and communication training into residency programs to support resident well-being.
- Utilize data-driven strategies to continuously monitor and engage residents and faculty in well-being interventions.

### **Methods**

The project centered on the development and implementation of leadership and communication training programs specifically tailored to residency programs. Initiatives such as "Resident as Chief" and "Support U" were designed to strengthen residents' leadership abilities and communication skills while integrating wellness components. The "Resident as Chief" program provided residents with structured leadership roles, fostering peer leadership and enhancing communication within the cohort. Meanwhile, "Support U" aimed to promote emotional and mental well-being through communication strategies that built resilience and empathy among residents. The programs were delivered through a combination of interactive lectures, case-based discussions, and group activities, designed to facilitate the practical application of these skills. Post-implementation surveys were administered to evaluate the programs' effectiveness in improving residents' leadership capabilities and their overall well-being.

### **Results/Outcomes/Improvements**

Residents participating in the “Support U” and “Resident as Chief” programs reported significant improvements in their leadership abilities and communication skills within their residency programs. Through the “Resident as Chief” program, residents in leadership roles demonstrated enhanced responsibility, initiative, and effectiveness in managing peer-related challenges. The “Support U” program contributed to stronger emotional support systems, with residents experiencing increased resilience and improved stress management through the application of advanced communication techniques. Feedback from both programs highlighted improvements in leadership engagement and communication dynamics, with residents noting a reduction in stress and an enhancement of peer support networks. These results suggest that the implementation of these programs has positively influenced resident leadership and well-being.

### **Significance/Implications/Relevance**

The findings from this study highlight the critical role of integrating leadership and communication training within GME to enhance resident well-being. The structured approach detailed in this project offers a replicable model for residency programs nationwide, providing an adaptable framework for addressing the unique stressors faced by residents. By fostering leadership and communication competencies, this intervention not only promotes resident wellness but also aligns with broader objectives to improve health care delivery and physician well-being. Over the long term, these programs have the potential to contribute to improved patient outcomes and reduced burnout rates among physician residents.

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## **Poster #57: Enhancing Program Coordinator Preparedness for Accreditation Site Visits: Outcomes from Site Visit 101 and 102 Training Sessions**

**Author(s):** Tanisha Davison, MBA

**Institution(s):** University of Alabama at Birmingham

**Abstract Type:** Innovation-focused

### **Background**

Accreditation site visits are essential for maintaining Program Requirements within graduate medical education (GME). Many program coordinators, particularly following post-pandemic turnover, lack formal training in file management and accreditation documentation. These gaps pose a challenge for large Sponsoring Institutions, overseeing numerous programs with substantial site visit volume. The ACGME has shifted from a predictable 10-year site visit cycle to a randomized selection process, increasing the risk of program unpreparedness. This shift makes it critical for coordinators to be continuously ready in accreditation files to avoid non-compliance. To address this issue at our institution, Site Visit 101 and 102 training sessions were developed to enhance coordinator preparedness. These sessions aim to close knowledge gaps, improving coordinators' ability to manage accreditation visits effectively. This study evaluates the sessions' impact on coordinators' understanding and readiness.

### **Objectives**

The primary objective is to evaluate the impact of Site Visit 101 and 102 training sessions on program coordinators' readiness for accreditation site visits. The study aims to assess the improvement in coordinators' knowledge, confidence, and practical skills related to site visit preparation and ongoing management of documentation, ultimately leading to better accreditation outcomes.

### **Methods**

The training content was developed by the Accreditation Analyst in the GME Office, drawing from experience and ACGME-required materials. Site Visit 101 provided a systematic overview of the accreditation process, covering the timeline from receiving the site visit notification letter to the day of the site visit itself. Coordinators learned how to manage logistics, communicate with stakeholders, and prepare essential documentation. Site Visit 102 focused on a detailed breakdown of the specific documents required, such as evaluations, resident/fellow files, and program-specific policies, and offered preparation strategies like organizing files by accreditation category and using templates to ensure consistency. Both sessions were delivered via Zoom across multiple days. A post-training survey assessed knowledge of site visit requirements, confidence in managing visits, and perceived preparedness, with qualitative feedback gathered on strengths and areas for improvement.

### **Results/Outcomes/Improvements**

Results show a significant increase in coordinators' knowledge of site visit requirements and confidence in managing site visits after attending the training. A total of 76 coordinators attended Site Visit 101, with 29 completing the post-survey. Of these respondents, 44.83% said the session exceeded expectations, and 75.86% were very satisfied with the content quality. For Site Visit 102, 75 coordinators attended, with 21 post-survey responses. Of those, 71.43% said the session exceeded expectations, and 85.71% were very satisfied with the content. The sessions improved coordinators' understanding of critical tasks such as organizing program documentation and ensuring compliance with ACGME requirements. When asked about

challenges in preparing site visit documentation, common issues included outdated information (37.5%) and inconsistent formatting (31.25%). Feedback such as “The session was very informative” reflected the value of practical strategies for addressing these challenges.

**Significance/Implications/Relevance**

Training sessions on the ACGME site visit process significantly enhanced program coordinators’ preparedness for accreditation site visits by increasing their knowledge, confidence, and practical skills. The positive feedback from participants emphasizes the effectiveness of this targeted approach, with many highlighting the value of real-world examples and detailed document breakdowns. These results suggest that regular integration of such training into professional development is essential, especially for large Sponsoring Institutions managing frequent site visits. To further strengthen program outcomes, future research should assess the long-term effects of this training on actual site visit performance and explore ways to address common challenges coordinators face, such as outdated information and inconsistent documentation practices.



## **Poster #58: National Trends in Delivery of ACGME-Required Educational Domains for Transitional Year Residents**

**Author(s):** Mary Sydney LeGuyader, MD; John Christensen, MD; AnnaLeah Eliason, MD; Jesse Steadman, MD; John Paul Leshock, MD

**Institution(s):** Intermountain Healthcare; Intermountain Health

**Abstract Type:** Research-focused

### **Background**

The ACGME Transitional Year Program Requirements allow for innovations in structure, design, and delivery of required curriculum. As of AY 2022-2023, the ACGME Transitional Year Requirements include education about health disparities, social determinants of health (SDoH), and quality improvement (QI) principles. Programs are also required to have residents participate in scholarly activity. There is currently no data available to understand how these requirements are currently administered. To better understand the depth and breadth of curriculum innovation for these required educational components, we administered a nationwide survey of transitional year programs.

### **Objectives**

The purpose of this study is to:

-Describe the educational format ACGME accredited transitional year residency programs use to deliver ACGME-required educational components, including information about (1) health disparities, (2) SDoH, and (3) QI principles.

-Describe strategies used by ACGME-accredited transitional year residency programs use to involve residents in scholarly activities.

### **Methods**

This IRB-approved study was distributed to publicly available email addresses for each of the 178 ACGME-accredited transitional year residency programs. Programs were included if located in the United States or its territories and were ACGME-accredited as of 2023. Responses were collected electronically and anonymously. The survey was emailed first to the address of the program director; if no response after one month, then the survey was emailed to the program coordinator or other identified program email address. In addition to demographic questions the following questions were asked regarding study objectives:

How does your residency deliver education about health disparities?

How does your residency deliver education about SDoH?

How does your residency deliver education about QI?

How does your residency deliver education about scholarly activity?

How does your residency program fulfill the ACGME resident scholarly activity requirement?

### **Results/Outcomes/Improvements**

We received 60 responses (33.7% response rate).

Health disparities are taught by didactic lecture (85%), online modules (41.7%), and small-group settings (38.3%), with 1.7% reporting not teaching the content.

Curriculum about SDoH is taught via didactic lecture (85.0%), online modules (40%), and small-group settings (33.3%).

QI curriculum is taught via didactic lecture (78.3%), small-group setting (38.3%), and online modules (31.7%).

Education about scholarly activity is delivered via didactic lecture (65.0%), small-group setting (30.0%), and online modules (28.3%); 3.3% of responding programs reported not teaching their residents about scholarly activity.

To fulfill the resident scholarly activity requirement, 71.7% of respondents have their residents present a case report; 61.7% have their residents present a subject of interest; 73.3% have their residents development a research or QI project; and 45% will publish a case report or clinical vignette.

### **Significance/Implications/Relevance**

These results indicate the following conclusions:

-Many programs take a multifaceted approach to educating residents about ACGME-required educational components with the most popular being didactic lectures, small-group workshops, and online modules.

-Experiential learning opportunities (including required or elective rotations and scholarly activities) are infrequently used to educate residents about health disparities and SDoH.

We hope by disseminating this data, it will inspire transitional year programs to consider other methods for delivering required curricula. The data show opportunities for programs to innovate in how they deliver required curricula, specifically regarding using experiential learning to educate residents about health disparities and SDoH. In the future, studies investigating best practices in delivering educational content about SDoH, health disparities, and QI principles for transitional year residents and GME trainees would further drive innovative curricula.

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## **Poster #59: Showcasing Your Program's Culture Through Virtual Interviews and No-Stakes In-Person Second-Look Events**

**Author(s):** Jenessa Wilson, BSSW; Lisa Thornton, AA

**Institution(s):** Mayo Clinic, Rochester, MN

**Abstract Type:** Innovation-focused

### **Background**

A well-organized residency recruitment process can create a positive experience for both the applicant and the program. Virtual interviews, while efficient and cost-effective to applicants, require complex coordination and scheduling by the program and cannot completely replicate an in-person visit. Planning no-stakes, in-person second-look events can give the candidates a chance to experience a program's culture firsthand. This can be done by intentional scheduling of time with program leadership, residents, and multidisciplinary teams, while highlighting program features and exploring the hospital(s), clinic(s), campus, and city.

### **Objectives**

1. Identify scheduling details crucial for creating virtual interview and no-stakes, in-person second-look event schedules
2. Review the streamlined process in Thalamus to invite, schedule, and maintain calendars by providing data, examples, and resources
3. Explore process of planning second-look events and discuss common barriers
4. Share outcome data from virtual interviews and in-person second-look events

### **Methods**

Our internal medicine residency program efficiently coordinated candidate and faculty schedules, managed invitations and acceptances, and organized social events with templated schedules. After our rank list was finalized, we offered five no-stakes, in-person second-look events. Applicants who attended one of the events received a 19-question survey around their experience three days after their visit. Two weeks after our last second look event, we sent out a seven-question survey those who did not attend any of the events.

### **Results/Outcomes/Improvements**

Of 398 applicants interviewed, 111 (28%) attended one of the in-person events. Among these attendees, 62 (57%) were women and 22 (20%) were from ethnic backgrounds considered underrepresented in medicine (URiM). Sixty-five (59%) of the attendees completed the post-event survey, while the response rate for non-attendees was 39%. The main reasons applicants chose not to attend included personal cost (63%), travel distance (43%), date conflicts (38%), and the perception that attending would not affect their ranking decision (37%). Non-attendees estimated a median cost of \$500 (IQR: \$400-\$1000) for attending. Among those attending, 94% reported a very or somewhat positive influence on their perception of the program's culture, while 77% said the visit influenced their ranking decision positively. Match data showed a significantly higher capture rate for women (43% versus 13%;  $p=.0005$ ) and URiM (60% versus 15%;  $p=.002$ ) who attended a second-look event compared to those who didn't.

### **Significance/Implications/Relevance**

The recruitment process for residency programs requires careful coordination and timing to create a positive experience for both candidates and program planners. Effective recruitment helps find the right match for both the organization and the candidate. A well-organized process, including providing comprehensive information during virtual interviews is crucial. Planning no-stakes, in-person second-look events can give candidates a chance to experience a program's culture firsthand. We found evidence that these events can enhance capture rates among women and URiM applicants, benefitting the diversity of an internal medicine residency program.

**Poster #60: Toward Intentional Rural GME: A Qualitative Study of Competency Needs for Rural Family Medicine Practice**

**Author(s):** David Schmitz, MD; Annie Koempel, PhD, RD; Andrew Bazemore, MD MPH

**Institution(s):** University of North Dakota; American Board of Family Medicine

**Abstract Type:** Research-focused

**Background**

Preparing residents to practice family medicine in a rural setting involves unique challenges and opportunities. Rural practices tend to have fewer material resources but are rich sites of relationship-building and community. Amidst new Review Committee guidelines, it is important to elucidate best approaches to preparing residents for rural family practice.

**Objectives**

To assess key competencies unique for rural practice from the perspective of family medicine residency program directors and rural practicing family physicians within the United States.

**Methods**

**Study Design:** For this qualitative research study, we recruited program leaders and directors attending the 2023 RTTC Annual national meeting. We recruited a random sample of early-career rural family physicians who responded to the American Board of Family Medicine 2023 National Graduate Survey.

**Instrument:** We developed focus group and interview scripts to uncover challenges to and opportunities within rural patient care and competencies unique for rural practice.

**Population Studied:** Two focus groups were conducted with 11 program leaders and directors during the 2023 RTTC Annual national meeting in Missoula, Montana, followed by 11 in-depth, semi-structured interviews with a random sample of family physicians practicing in a rural setting.

**Analysis:** All data was transcribed verbatim and analyzed utilizing NVivo software following an inductive content analysis approach.

**Results/Outcomes/Improvements**

Competency goals were identified. Additionally, key features of curriculum and modes of education were identified that could best meet these goals. Identified competencies included, but were not limited to, agency, flexibility, confidence, emotional resiliency, and adaptability across settings. Strategies to prepare residents for rural practice focused on key aspects of residency curriculum, direct experiences, and the importance of modeling or mentoring.

**Significance/Implications/Relevance**

The results from this study articulate with and build upon other residency competence models and will form the basis of a larger qualitative study aimed at developing supplementary milestones for rural practice. This study can serve to inform not only GME programs in family medicine, but also in other specialties seeking to improve access to high-quality care in rural settings.

**References**

Longenecker R, Wendling A, Hollander-Rodriguez J, Bowling J, Schmitz D. Competence revisited in a rural context. *Family medicine*. 2018;50(1):28-36.

Schmitz D. The Role of Rural Graduate Medical Education in Improving Rural Health and Health Care. *Fam Med*. 2021;53(7):540-543. <https://doi.org/10.22454/FamMed.2021.792533>.

**Poster #61: Assessing Understanding of ACGME Milestones**

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**Abstract Type:** Research-focused

**Background**

Residency programs accredited by the ACGME utilize specialty-specific Milestones to evaluate resident progress. The ACGME Milestones consist of five levels with Level 1 traditionally representing expectations of performance of an incoming resident. The traditional evaluation system of medical students differs from the residency-based Milestones approach. The level of exposure to the ACGME Milestones amongst students is not well understood. Determining preparedness for residency and conveying that information to future residency programs either during the application or post-match process is an area of significant interest for all stakeholders. There is also limited information on whether medical student awareness of the Milestones could enhance the establishment of learning goals during fourth year (M4) rotations and whether it could enhance the ability to prepare for residency.

**Objectives**

The aim of this study was to assess the knowledge of the ACGME Milestones among medical students, residents, and attending physicians, and to evaluate the perceived usefulness of this information for the establishment of learning goals during M4 rotations and for residency preparation.

**Methods**

This cross-sectional study utilized a web-based survey, administered to a convenience sample of all fourth-year medical students, and residents and faculty (in pediatrics, obstetrics and gynecology (OB-GYN), family medicine, internal medicine, surgery, psychiatry, and neurology) at a single teaching institution. Survey constructs included demographics, knowledge of the ACGME Milestones, perceived usefulness of the Milestones, and level of expected resident preparations.

**Results/Outcomes/Improvements**

Out of 150 respondents, the majority were female (58%, n=87) and faculty (44.2%, 57/129). Among respondents graduating after implementation of the Milestones in 2013, 62.8% (71/113) reported their medical school curriculum did not reference the ACGME Milestones. Half of current M4 medical students surveyed reported no knowledge of the Level 1 milestones for the specialty into which they were applying (48.8%, 20/41). Students who learned about Level 1 milestones during medical school found this information useful (69.2%, 27/39). Of those, 76.9% (30/39) found this knowledge useful to develop M4 rotation learning goals and 79.5% (31/39) found it useful for residency preparation. Similarly, among those who were not taught about the Milestones or had graduated from medical school prior to the initiation of the Milestones, the majority felt this information would be useful in both M4 learning goal development (75.6%, 69/90) and in preparation for residency (80%, 72/90).

**Significance/Implications/Relevance**

Most medical students were unaware of the ACGME Milestones for their specialty of interest

and may begin residency underprepared in understanding ACGME competencies. Exposing fourth-year medical students to the ACGME Milestones may allow them to better set their own learning goals for the fourth year to prepare for residency. This may, in turn, help them to better meet expectations that are set for them and improve overall performance during the intern year and thereafter. This information could also be utilized in the evaluation of preparedness for residency during the residency selection process or assist with post-match warm hand-offs between medical schools and residencies.