EDUCATION RESEARCH DAY

Icahn School of Medicine at Mount Sinai

Institute for Medical Education

April 24, 2018

Sponsored by the Institute for Medical Education

Education Research Day 2018

Welcome to the Institute for Medical Education (IME) at the Icahn School of Medicine's fifteenth annual Education Research Day (ERD). It is exciting to see the breadth of innovative medical education scholarship developed by our faculty, trainees, students and staff. Each year we welcome an expanding group of educators from all disciplines and levels of training. We are proud to display the excellent work being done in education research across the Mount Sinai Health System.

There are three goals for ERD:

1. To highlight and disseminate the educational research and innovative curriculum development at Mount Sinai and its affiliate institutions.
2. To provide a forum for educators to learn from each other and collaborate.
3. To prepare authors for regional and national presentation and dissemination of their scholarly educational work.

All submitted abstracts were reviewed by a selection committee. Abstracts were blinded and evaluated based upon established criteria for scholarship in education: Clear Goals, Appropriate Methods, Measures of Quality/Effectiveness, Significant Results and Reflective Critique. Innovation and impact of the project were also considered.

This year, five abstracts were chosen from 48 submitted to receive Blue Ribbons. Blue Ribbon Winners represent outstanding examples of educational scholarship.

In addition, we are very pleased to continue the "Facilitated Poster Walk and Discussion**"** at ERD this year. This began in 2013 to allow authors the opportunity to present their work, obtain feedback and gain valuable ideas from colleagues and peers in a structured manner. Abstracts have been organized into thematic groups and we have invited distinguished faculty to lead a discussion of the posters in a group with authors and visitors. Please review the schedule of these walks and join in to learn more.

We wish to thank the Selection Committee, the Department of Medical Education, and the authors who submitted their work. Congratulations to all of our authors for their dedication to education research and for sharing their innovative work with our community.

Reena Karani, MD, MHPE
Director,
Institute for Medical Education
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Robert Fallar, PhD
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Education Research Day Selection Committee 2018

Selection committee members did not participate in the discussion or voting for abstracts in which they were involved.

Committee Members:

Reena Karani, MD, MHPE, Committee Chair

Linda DeCherrie, MD

John Di Capua, MHS

Carrie Ernst, MD

Robert Fallar, PhD

Benjamin Laitman, PhD

Lauren Peccoralo, MD, MPH

Kamron Pourmand, MD

Jonathan Ripp, MD

Rainier Soriano, MD

Christopher Strother, MD

Talia Swartz, MD, PhD

David Thomas, MD, MHPE

This year, 48 abstracts were submitted by faculty, students, trainees and staff across the Health System.

All abstracts were reviewed by the 2018 ERD Selection Committee. Of the 48 submissions, five abstracts have been awarded Blue Ribbons as outstanding examples of educational scholarship.

Please join us congratulating the 2018 Blue Ribbon recipients:

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A Longitudinal Nutrition Counseling Curriculum for Internal Medicine Residents
Colin Feuille, Brijen J. Shah, Andrew Coyle

Abstract #45
Pediatric Residency Program Directors' Current Practices and Attitudes toward Parenting-Focused Curricula
Blair S. Hammond, Lianna Lipton, Aliza Pressman, Mariel Benjamin, Gary Beck Dallaghan, Joel Forman, Carrie Quinn

Abstract #21
Use of a Quick Multimedia Learning Module Facilitates Knowledge Acquisition of Cardiac Physiology
Joe-Ann Moser, Gale Justin, Rainier Soriano

Abstract #16
The Sleep Hygiene in Hospital Project: SHH!
Daniela Mikhaylov, Puja Turakhia, Sharon Barazani, Dahniel Sastow, Hyung Cho, Michael Herscher

Abstract #8
Simulation-Based Training for Diagnostic Paracentesis Improves Patient Outcomes
Elijah Verheyen, Daniel Castaneda, Adiac Espinosa Hernandez, James Salonia, Manideep Duttuluri, Joseph Mathew, Susannah Kurtz

Education Research Day 2018 Itinerary
April 24, 2018
Guggenheim Pavilion Atrium

10:00 – 11:00 am	**Daniel Katz, MD** Simulation (posters 1 – 4)
	Christopher Strother, MD Simulation II (posters 5 – 8)
10:30 – 11:30 am	**Beverly Forsyth, MD** Professional Development I (posters 9 – 12)
11:00 am – 12 noon	**Kamron Pourmand, MD** Quality Improvement (posters 13 – 17)
11:30 am – 12:30 pm	**Peter Gliatto, MD** Curriculum: UME I (posters 18 – 22)
12 noon – 1:00 pm	**David Thomas, MD, MHPE** Curriculum: GME I (posters 23 – 28)
12:30 – 1:30 pm	**Reena Karani, MD, MHPE** Curriculum: UME II (posters 29 – 33)
1:00 – 2:00 pm	**Natasha Anushri Anandaraja, MD, MPH** Global Health (posters 34 – 36)
1:30 – 2:30 pm	**Rob Fallar, PhD** Assessment (posters 37 – 40)
2:30 – 3:30 pm	**Eric Ganz, MD** Curriculum GME II (posters 41 – 45)
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SIMULATION

POSTERS 1 – 8

ABSTRACT #1

The Role of Video Debriefing as a Method of Feedback following Simulated Pediatric Resuscitation

Authors: Ariella Barhen, Horton Lee, Jose Quitain, Tania Lopez, Suzanne Bentley

Purpose: An integral part of Pediatric residency training is learning how to resuscitate and stabilize critically ill children. Opportunities to encounter these situations in order to achieve a level of competence are often limited in residency. Simulation-based education (SBE) is an effective tool used by medical professionals to practice techniques and assess performance in a structured, patient-safe setting. While debriefing is an essential component of effective simulation exercises, the best model of debriefing remains under debate. The purpose of this study is to evaluate whether the use of video debriefing after simulated pediatric resuscitation improves residents' performance, confidence, and self-perceived competence in managing pediatric resuscitation.

Methods: Residents were given a pre-assessment questionnaire evaluating their prior experience with pediatric arrests and critical care cases, perceptions of previous team functioning during resuscitations, as well as their level of confidence and self-perceived competence in performing pediatric resuscitation and caring for critically ill children. Questionnaire data will be used to inform Phase 2 of this study to encompass participation of learners in a simulated case including 3 critical care management sub-sections. Residents will be randomized to either video debriefing group (intervention group) or traditional debriefing group (control) following case completion. Questionnaires will be completed both 24 hours and 6 months post-simulation to assess retention of content and level of confidence.

Results: The pre-assessment questionnaire showed a 54% response rate to date and reveals that residents felt most uncomfortable managing pediatric cardiac arrest (71% vs 6% "very comfortable"), followed by 65% for sepsis, 64% for difficult airway, and 58% for an overdose patient. Conversely, majority reported feeling "comfortable" or "very comfortable" managing allergic reaction, status asthmaticus, and trauma. These results will tailor the Phase 2 interventional step of this study (likely simulation case of sepsis requiring vasopressors, seizure with difficult airway, and pediatric cardiac arrest), which will be utilized to compare the 2 types of debriefing in regards to change in confidence and self-perceived competence.

Conclusion: Pediatric residents are expected to complete residency confident and competent in managing critically ill children. Our pre-assessment survey reveals the types of cases that residents are most uncomfortable managing, which will inform the Phase 2 educational intervention. We hope to determine if the use of video debriefing as a method of direct feedback results in improved provider performance, confidence, and self-perceived competence during pediatric resuscitation when compared to standard oral debriefing alone. This will aid in optimizing residents' training and education, as well as establishing whether video debriefing is a more effective method of direct feedback during Phase 2 of this study.

ABSTRACT #2

Use of Virtual Reality in Anatomy Education: Effects on Cognitive Load

Authors: Stephanie Hanchuk, Katelyn Stepan, Joshua Zeiger, Anthony Del Signore, Raj Shrivastava, Satish Govindaraj, Alfred Iloreta

Purpose: Using new teaching methods in anatomy education that allow for more effective learning and memory consolidation is essential for the advancement of medical education. Cognitive load theory based instructional design can be used to optimize learning modalities for spatially complex subjects. Currently, little objective data exists using cognitive load theory for assessing the utility of novel instructional methods for teaching clinical anatomy. This study aims to investigate the effects of a three-dimensional (3D) virtual reality (VR) system on the user's cognitive load.

Methods: A randomized, controlled study was carried out with first and second-year medical students at the Icahn School of Medicine at Mount Sinai. The ventricular system and cerebral vasculature were studied using either online textbooks or a real-time, interactive 3D VR model using the Oculus Rift VR System. After the study period, subjects completed a NASA-TLX survey and open-ended questionnaire to assess cognitive load perceived during the experiment.

Results: Analysis of responses revealed that there was no significant difference in total cognitive load between the control and VR groups. The VR group found the learning experience to be significantly more physically demanding, but less frustrating than the control group ($p < 0.01$). When asked about their experience with the VR system, the students generally were enthusiastic and motivated to learn in an interactive manner. However, the majority felt that the user interface of the VR system was difficult to master in the short experimental time limit (5 minutes); therefore, the acquisition of anatomical knowledge was hindered by the time and mental effort spent configuring the technology.

Conclusion: This study demonstrated that learning anatomy using a 3D virtual reality model of neuroanatomy required an equal amount of total cognitive effort as traditional methods of anatomy curriculum when used in a concise single anatomy lesson. As virtual reality technologies advance and become more affordable, these devices will be an attractive addition to anatomy curriculum. The current challenges illustrated with the acquisition of knowledge from novel technologies can be overcome as students become more adept at using virtual anatomy models and future implementations of virtual reality account for the design characteristics that best handle cognitive load.

ABSTRACT #3

An Integrated Difficult Delivery and Neonatal Resuscitation Simulation for EM Residents

Authors: Jillian Nickerson, Hayley Neher, Suzanne Bentley

Purpose: Newborn delivery and resuscitation are rare, but essential Emergency Medicine (EM) skills. EM residents learn these skills when rotating through obstetrics (OB) and pediatrics, commonly without the opportunity for hands-on participation during critical cases or integration of the two skills. Simulation can provide integrated training in these skills. Our study seeks to evaluate whether a didactic session and in-situ simulation can improve EM residents' knowledge, confidence, and technical skills in performing difficult deliveries and neonatal resuscitation.

Methods: We assessed baseline knowledge with a multiple choice test, self-perceived adequacy with a survey, and technical skills with an objective structured clinical exam (OSCE) graded with a checklist of critical actions. Following case completion, we debriefed utilizing plus/delta format with standardized teaching points and individualized feedback. The simulation and checklist of critical actions were developed from previously validated tools in collaboration with content and simulation experts from OB and Pediatrics. We will provide a two-hour didactic with skill stations. After three to six months, residents will repeat the multiple choice test, self-perceived adequacy survey and the OSCE. We will compare pre- and post-test scores to determine the impact of our intervention.

Results: To date, we have collected baseline knowledge and self-perceived adequacy from 53 (64%) participants. We found that interns had a baseline knowledge deficit compared to PGY2-4 (53% vs 66%, p=0.034). Overall, we found that while residents felt moderately confident in normal deliveries (PGY2-4 averaged 3.5 on a scale from 1= not confident at all to 5 = extremely confident); there was no significant difference between senior residents and junior residents. However, the majority (75%) of PGY-4 at the end of their training rated themselves as "not confident at all" or "barely confident" at performing difficulty deliveries and no residents felt "confident" or "very confident" in performing neonatal resuscitation. There was no difference in performance in the OSCE between junior and senior residents. On average, residents scored 66% (11.9/18) for shoulder dystocia and 65% (9.7/15) for neonatal resuscitation on the critical action checklist.

Conclusion: Emergency medicine residents (even graduating residents) are not confident in performing newborn delivery or resuscitation and have knowledge and skill deficits in these areas. We hypothesize this formalized curriculum will improve these deficits.

ABSTRACT #4

Ex Vivo Bovine Model: A Diagnostic and Therapeutic Endoscopy Training Model

Authors: Jaspreet Sandhu, Carl Winkler, Xiaohong Yan, Vesna Cekic, Chandana Herath Mudiyanselage, Richard Whelan

Purpose: Flexible endoscopy is an integral part of General and Colorectal Surgery. The American Board of Surgery (ABS) now mandates endoscopy training and successful completion of the Fundamentals of Endoscopic Surgery program. As a result simulators have become a ubiquitous tool for pre-clinical training. While simulators are useful for learning scope insertion and maneuvering skills, they fall short in actual tissue handling via endoscopic instrumentation. We developed an ex vivo bovine model to be used as an adjunct to endoscopy simulators. Once insertion and maneuvering skills have been acquired, trainees will use this model to learn basic diagnostic and therapeutic endoscopy skills. These include clinically essential skills such as biopsy, tattooing, and polypectomy.

Methods: A bovine colon obtained from a slaughterhouse is cleaned, and the proximal end is everted to expose the mucosa. Targets for biopsy and saline lift are created using a heated nail head. Polyps are made using a hemorrhoid bander. Once the lesions are created, the end is inverted and sealed using a clip. The colon is insufflated, and the trainees proceed to biopsy 6 targets, lift 6 targets, and snare 4 polyps. The difficulty level can be increased by placing the colon in different configurations.

Results: Early experience in this ongoing study indicates that proficiency with the model can be obtained in 5 sessions. Significant outcomes may be more subjective than objective. While time to complete the procedures and the accuracy of each procedure improves as the sessions progress, the participants report increasing comfort in tissue handling and knowing when and how to adjust their instruments based on tactile feedback in order to improve the accuracy of the procedure.

Conclusion: The ex vivo bovine model provides realistic visual and tactile feedback. Further, it mimics clinical endoscopy in terms of tissue handling, scope manipulation using torque and tip deflection, insufflation, lens cleaning, as well as through the channel instrumentation. These advantages enable optimal pre-clinical training in basic diagnostic and therapeutic endoscopy after scope insertion and maneuvering skills have been acquired. Gaining proficiency with the ex vivo bovine model allows trainees to develop more advanced skills during their subsequent clinical exposure to endoscopy.

ABSTRACT #5

Ex Vivo Bovine Model: An ESD Training Model

Authors: Carl Winkler, Jaspreet Sandhu, Xiaohong Yan, Erica Pettke, Chandana Herath Mudiyanselage, Vesna Cekic, Nipa Gandhi, Richard Whelan

Purpose: Endoscopic Submucosal Dissection (ESD) is the gold standard treatment for large sessile colorectal polyps in the Far East. In the West, the majority of these lesions are still removed via segmental colectomy with its attendant morbidity and cost. In the U.S., a handful of surgeons have embraced the ESD technique. However, attaining ESD proficiency has proved difficult, particularly given the paucity of early gastric neoplasms in the West. In Japan especially, these lesions provide ample practice for trainees, allowing them to master the procedure before attempting colorectal ESD, which is more technically demanding. This abstract presents the final phase of a three-part ESD training program feasible for Western surgeons. It is focused on the ex vivo bovine large bowel model, which closely simulates human cases. Our group hypothesizes that sufficient expertise can be gained, using a combination of inanimate, and ex vivo animal models, to safely perform colorectal ESD resections in human patients. If correct, a high volume of gastric cases would no longer be a prerequisite for establishing a clinical practice in colorectal ESD.

Methods: Once trainees drill to proficiency with our inanimate pattern tracing, and ex vivo porcine stomach models, they begin training on the ex vivo bovine large bowel. The model consists of a meter-long section of bovine large bowel affixed to a table-mounted pegboard. There is a simulated lesion marked on the mucosal surface of the large bowel. An endoscopy tower with ESD capability and a pediatric colonoscope are used to conduct the procedure. This model is unique in that it requires insufflation without perforation to complete the task. Additionally, the conformation of the bowel can be modified to adjust the difficulty of the procedure. At our institution, two attending colorectal surgeons performed a total of forty simulated ESD cases using the bovine large bowel model. The procedures were video recorded in their entirety, and metrics including total procedure time, total purposeful procedure time, number of full and partial thickness perforations, as well as radial margin distance were kept.

Results: The metrics used to measure performance in our small cohort had no discernible trend over the course of training. This was unsurprising, given our previous experience with the inanimate and ex vivo porcine stomach models. Particularly with the ex vivo models, the tissue quality was highly variable, and had an outsize effect on our metrics. That being said, both trainees felt more confident in their performance of the procedure over the course of training. Additionally, the completion rate of their clinical (human) ESD cases improved notably over this period.

Conclusion: Safe preclinical training in colorectal ESD can be accomplished with an entirely inanimate and ex vivo program, culminating with the bovine large bowel model. This program is more feasible in the West, where the volume of gastric training cases is insufficient.

ABSTRACT #6

EMS to Emergency Physician Patient Handoff:
Quality and Patient Safety Measure with Deliberate Practice in Simulation

Authors: John Vega, Shannon McNamara, Michael Hilton, Michael Redlener

Purpose: EMS to Emergency Department provider hand offs are often performed in chaotic, high stress environments, involving ill patients. These high stress environments can lead to hand off errors such as incorrect, incomplete or forgotten information, lack of background, unclear intervention and response in pre hospital course, to name a few. These issues can potentially lead to delayed patient care, intervention, disposition, and in severe cases increased morbidity and mortality. The aim of the project is to enforce current institutional EMS hand off guidelines using simulation, deliberate practice, to master communication ultimately creating more effective hand off methods.

Methods: Three written standardized cases involving cardiac, respiratory, and trauma related complaints would be presented to the EMS providers. These providers will work through their pre-hospital care treatment algorithms and upon completion will present to the emergency department physician, using current institutional approved hand off methods, IMIST. It is important to note that no patients or simulators will be used for the initial phase of deliberate practice. The emergency physician will receive this handoff to continue care and will also be able to ask certain questions that may be out of scope of IMIST, but deemed pertinent to patient care. Deliberate practice will focus on provider-to-provider communication and hand off of patient information. The main goal of deliberate practice in the initial phase of this project to correct, in real time, errors in patient information, incorrect formats, missed information, and failure of any pre-hospital treatments. This will help to fortify integral aspects of IMIST and to assure mastery prior to progression of the next phase, which will ultimately involve simulators and other factors that will mimic, clinical patient care scenarios. It will be important to have as many full time EMS and physician staff members present and rotate through the simulation training for standardization of practice. Validated surveys will be used to assess, retention of information and learned tasks, while also assessing proof of concept of deliberate practice and mastery learning.

Results: Pending.

Conclusion: No conclusions can be drawn from project at this time. The goal is that with coordination between EMS, Simulation, and Emergency Department staff we hope to ultimately create a patient hand off method that mitigates errors, while maintaining the integrity of patient related information and patient care.

ABSTRACT #7

"Speaking Up" in the Emergency Department

Authors: Suzanne Bentley, Timothy Snow

Purpose: To describe Emergency Department (ED) resident responses on a validated "speaking up" survey as an educational needs assessment for a novel simulation initiative to quantify and improve "speaking up" performance.

Methods: "Speaking up" behaviors and perceptions from ED residents will be assessed utilizing a previously validated Speaking Up Climate safety scale and professionalism scale. Mean response scores from ED residents will be compared to mean response scores from the validation study population which was comprised non-ED providers. Phase 2 will include a simulation based intervention involving medical management of a simulated patient case with standardized, embedded challenges requiring "speaking up". Post-simulation educational debriefing will include structured discussion involving tools and techniques for speaking up.

Results: To date, 33 of 65 ED residents surveyed have responded including 13 PGY-1s, 7 PGY-2s, 5 PGY-3s, and 8 PGY-4 respondents. The statements that the residents most strongly disagree with are "I am not responsible for the safety of patients on other healthcare teams" and "The unprofessional behavior of providers on other healthcare teams in my clinical area is none of my business". The statement that the residents most strongly agree with is "Speaking up about unprofessional behavior is important for patient safety". The largest difference between ED residents and the validation study involved the statement "I am not responsible for the safety of patients on other healthcare teams" where the ED averaged between strongly disagree and disagree while the validation study sample averaged between neutral and agree. There were two other statements that had >1 point difference in Likert responses, these were: "The unprofessional behavior of providers on other healthcare teams in my clinical area is none of my business" and "In my clinical area, it is difficult to speak up if I have a patient safety concern". In both statements ED residents fell on the disagree side of neutral while the validation study cohort averaged towards agreement.

Conclusion: The major difference between the two samples involves management and professionalism with patients assigned to other clinical teams. Overall, the responses which averaged close to neutral and similar to the validation study, offer opportunity for improvement. Phase 2 will include comparison of survey responses to actual performance during challenging simulations, as well as the provision of education and tools for residents to improve their ability to "speak up".

ABSTRACT #8

Simulation-Based Training for Diagnostic Paracentesis Improves Patient Outcomes

Authors: Elijah Verheyen, Daniel Castaneda, Adiac Espinosa Hernandez, James Salonia, Manideep Duttuluri, Joseph Mathew, Susannah Kurtz

Purpose: Guidelines recommend that a diagnostic paracentesis be performed in all patients with cirrhosis and ascites upon hospital admission. Paracentesis is often performed by internal medicine (IM) residents however few institutions have a formal training program. Delays in paracentesis >12 hours have also been linked to increased patient mortality. The aim of this study was to improve confidence and competence in paracentesis through simulation based training.

Methods: We implemented a simulation-based training (SBT) course for all internal medicine. 130 IM residents underwent SBT, which included pre-course reading, small group discussions, and task training. We performed a retrospective review of all patients with ascites admitted in two 12- month periods, before and after SBT at 2 academic teaching hospitals. The primary outcome was time from admission to paracentesis. Secondary outcomes included in-hospital mortality, hospital length of stay (LOS), and development of acute kidney injury (AKI).

Results: A pre-course survey revealed that most residents had never performed a paracentesis, had little prior training and were not confident in performing paracentesis. A total of 678 charts for patients admitted with diagnosis of ascites were reviewed, and a total of 89 paracenteses were performed pre-SBT and 65 post-SBT. IM residents performed more paracenteses following SBT (23.6% vs. 33.9%, p=0.17). The remainder were performed by interventional radiology (IR). Mean time to paracentesis decreased for house staff (49.1h to 39.9h, p=0.76) and increased for IR (57.5h to 82.2h, p=0.13) after SBT. IM residents were more likely to perform paracentesis on patients with higher MELD scores and rate of ICU admission, as compared to the IR cohort. There was a statistically significant decrease in development of AKI in the IM resident cohort (47.6% to 18.2%, p=0.04) and remained unchanged in the IR cohort (32.4% to 34.9%, p=0.78). Mean hospital LOS (15.4d to 10.0d, p=0.29) and in- hospital mortality (19.0% to 9.1%, p=0.36) decreased in the resident cohort, while they remained unchanged and increased in the IR-cohort.

Conclusion: Our study shows that after implementation of a simulation-based paracentesis course, IM residents performed a greater proportion of procedures, had a decreased time to paracentesis, and had improved patient outcomes in higher acuity patients. In the post-intervention period, there were lower rates of AKI, decreased hospital LOS, and lower in-hospital mortality. These findings may be a result of education, confidence, awareness, and skill acquisition in performing paracentesis that simulation-based training provides.

PROFESSIONAL DEVELOPMENT I

POSTERS 9 – 12

ABSTRACT #9

Residents' Perceptions of Inappropriate Consults: Ongoing Expectations of Expertise among Neurology and Medicine Residents Suggest Areas for Improvement in Interdisciplinary Collaboration

Authors: Charles Sanky, Eric Bortnick, Caroline Gentile, Stephen Krieger

Purpose: This multi-year project reassessed biases in residents' perceptions of expected knowledge and inappropriate consults to understand potential implications for interdepartmental education.

Methods: Furthering our previously presented methodology, neurology residents (NRs, n=18) and internal medicine residents (IMRs, n=24) at Mount Sinai completed a survey containing five neurology and five medicine board-style questions reflecting consultation scenarios. After answering, residents rated each to the extent it reflects "common knowledge" to both specialties and whether a consult is warranted. Participants also rated their knowledge, confidence calling consults, and whether their residency includes education in other specialties. Paired sample t-tests were utilized. A structured interview sub-study of self-selected residents further elucidated attitudes toward consultations and offered real-world insights to guide future studies and interventions.

Results: IMRs and NRs correctly answered significantly more questions from their own specialty than from the other field ($p<0.001$) and NRs answered significantly more neurology questions correctly than IMRs ($p=0.014$). IMRs thought NRs should know more neurology answers than NRs actually would know ($p=0.007$); conversely, NRs thought IMRs should know more neurology answers than IMRs actually would know ($p=0.044$). IMRs felt their residency programs provide more education in other specialty areas than NRs ($p<0.001$). Although residents highly scored their ability to discern an appropriate consult, IMRs scored significantly higher than NRs ($p=0.023$). In structured interviews, 14/14 residents independently volunteered that an appropriate consult must pose a specific question. Most NRs (6/7) expected IMRs to complete an initial investigation before requesting a consult. All residents expressed that education is an ideal goal through consults, but it does not always happen due to workload. Residents also shared potential solutions, including addressing communication issues between departments (12/14), enhancing rotations on other services with an emphasis on interdisciplinary collaboration (9/14), streamlining workflows and standardizing consult protocols (8/14), telecommunication improvement (5/14), and creating attending-directed/non-teaching services to address non-educational consults (3/14).

Conclusion: Our findings support that discordant expectations of expertise contribute to perception of inappropriate consults. In the context of our study's previous iteration, this phenomenon further underscores the importance of aligning residents' expectations and goals of interdepartmental collaboration. Future work will focus on evaluating residents' perceptions of inappropriate consults in real-time to determine how their expectations affect interdepartmental collaboration in practice. Understanding this relationship will help inform the development and implementation of interdisciplinary residency education interventions.

ABSTRACT #10

Mount Sinai Health Hackathon: Harnessing the Power of Collaboration to Advance Experiential Team Science Education

Authors: Peter Backeris, Anthony Costa, Layla Fattah, Jason Rogers, Louise Lammers, Caroline Eden, Karan Amlani, Kevin Costa, Janice Gabrilove

Purpose: Innovation in healthcare is increasingly dependent on technology and teamwork, requiring effective collaboration between disciplines. Mount Sinai Health Hackathon 2017 aimed to harness the power of multidisciplinary collaboration to foster innovation in the field of cancer. Participants were immersed in an intensive weekend, working in teams to develop technology solutions to important problems in the field of cancer.

Methods: Adapted from guidelines provided by MIT Hacking Medicine, the 2017 event gathered 87 participants, representing 17 organizations with a diverse range of backgrounds in clinical practice, bioinformatics, software and hardware, product design, business, digital health.
The overall participation model included:
Phase 1: pre-Hackathon priming activities using online forums Trello and Slack
Phase 2: a 48-hour onsite hackathon to catalyze innovation through problem sharing, solution pitches, team formation and development of prototype solutions
Phase 3: competitive presentations to judges and prize awards
Phase 4: support to stimulate continued development of innovations
The 14 teams formed during the Hackathon created innovations ranging from diagnostic devices, networking apps to artificial intelligence tools. The top three teams were each awarded $2500 to support their projects' future development.

Results: Qualitative and quantitative survey data revealed the hackathon experience fostered collaborative attitudes and a positive experience for participants, providing insight into the potential benefits of team science. From the survey responses received (n = 24), 96% of respondents reported that interdisciplinary working increased their ability to understand and solve healthcare problems, 96% reported making new professional connections and 79% indicated an intention to continue working on their project after the event. Teams will be followed up in 6 months' time to determine if they file new patents, create new companies, or leverage the connections made through the Health Hackathon experience.

Conclusion: Our experience indicates that a Health Hackathon is a compelling and productive forum to bring together students, trainees, faculty and other stakeholders to explore tech-based solutions to problems in cancer. It is a valuable tool to foster collaboration and transdisciplinary team science. Follow up analysis will determine to what extent the Mount Sinai Health Hackathon contributes to an ecosystem that encourages individuals in healthcare and technology development to work together to address unmet needs in healthcare.

ABSTRACT #11

InCHOIR Learning Lab: A TL1 and Workforce Development Initiative at Mount Sinai

Authors: Emma Benn, Janice Gabrilove, Layla Fattah, Emilia Bagiella

Purpose: Science and clinical practice are widely regarded as being complementary and synergistic. In an effort to enhance the team science, translational research capacity of the TL1 scholars at Icahn School of Medicine at Mount Sinai (ISMMS), the InCHOIR learning lab aims to provide an accessible, workforce-wide lecture series on the fundamental methods and concepts of randomized clinical trials.

Methods: The InCHOIR learning lab is a monthly one hour lecture series delivered by a range of expert clinical and translational researchers, followed by a one hour "Meet the Expert" session. The InCHOIR lecture series has covered a wide range of topics including, but not limited to: Decision Models; Race and Causal Inference; Innovative Strategies for Assessing Environmental Health across the Life Course; Statistics for Geneticists and Genetics for Statisticians; and From the Lab to Translation to Policy – The Neuroscience of Addiction. The "Meet the Expert" session offers TL1 predoctoral and postdoctoral scholars and KL2 scholars the opportunity to have intimate, informal discussions with experts about their career trajectories.

Results: Feedback from participants has been overwhelmingly positive. Participants have gained important insights into key topics relevant to early stage researchers. The "Meet the Expert" sessions have yielded honest and important conversations about crucial topics ranging from finding effective mentors to essential strategies for establishing a work-life balance, to overcoming adversity as underrepresented minorities and women in translational research.

Conclusion: Attendance at the INCHOIR learning lab is increasing month on month, indicating the perceived need for this learning not just from early stage researchers, but also from students, senior faculty, and research staff more generally. The InChoir series provides added value through the creation of a video library, fostering new collaborations and contributing to the Icahn School of Medicine at Mount Sinai and Graduate Medical Education landscape. Priorities for the program are to increase internal visibility, in order to continue to grow attendance by MSHS students, research staff, nurses, postdoctoral fellows and residents. The program is also exploring how to engage external participation from regional Clinical and Translational Science Award (CTSA) programs and from community advocates actively involved in community-academic research partnerships.

ABSTRACT #12

Learning to LEAD: Leadership Emerging in Academic Departments

Authors: Janice Gabrilove, Layla Fattah, Elizabeth Howell, Andrew Mullaney, Lisa Bloom, Michele Fredericks, Cara Della Ventura

Purpose: Leadership is an essential and recognized team science competency. The ConduITS LEAD Program is designed to; (1) provide personal and professional development opportunities for participants; (2) promote organizational change through applied leadership skills; (3) provide a platform for integrating multiple disciplines and fostering interprofessional relationships among investigators and clinicians.

Methods: The structured LEAD program curriculum included monthly interactive seminars covering: personal & situational leadership; unconscious bias; communication & influence; navigating personal conflict; negotiation and networking; selecting & managing the right team; teamwork; financing the academic mission, budgets & business plan development; strategic planning & vision; presentation skills. To foster the development of leadership skills participants also engaged in Hogan Assessments, individual and peer mentoring from an executive coach and self-directed learning activities and assignments. Completion of an individual Capstone leadership project empowered learners to enact practice change through the implementation of leadership concepts in practice.

Results: Through a competitive and rigorous application process, 24 junior faculty with evidence of leadership potential and trajectory were chosen to participate. The current cohort of LEAD participants joined in February 2017, and completed the program in January 2018. Using qualitative and quantitative survey methodology, participants are being evaluated for self-perceived changes to attitudes, belief, skills & development of new group relationships & collaborations on a personal and organizational level. Capstone project submissions were mainly focused on implementing situational and personal leadership concepts to practice, with 30% of the cohort having implemented their Capstone project in practice at completion of the program. Participants will be followed up in six months' time to evaluate the impact of the LEAD program on their practice.

Conclusion: Leadership is known to be a core component of team science, and the ability to implement leadership into practice may advance personal and professional change. This program addresses the need to empower Junior Faculty to engage in leadership in practice. In addition, this program is able to provide added value to extend the reach of the OADE, promote new individual collaborations and facilitate additional leadership training efforts at our Institution.

QUALITY IMPROVEMENT

POSTERS 13 – 17

ABSTRACT #13

A Student-led Initiative to Increase MyChart Utilization at an SBHC

Authors: Janet Lee, Grisselle Defrank, John Gaipa, Martha Arden

Purpose: Purpose: In the age of electronic health records, patient portals such as MyChart are an important means of meaningfully engaging patients in their own care. Despite the benefits portals offer, getting patients to enroll can be burdensome on providers and the process for patients is time-consuming and confusing. In the face of these difficulties, providers at the Manhattan Center for Science and Math's (MCSM) school-based health center (SBHC) struggled to get patients to enroll in MyChart, leading to low utilization. To improve this, SBHC staff implemented a quality improvement (QI) project guided by MCSM students, as existing literature demonstrates that peer-initiated programs are effective in increasing health care utilization.

Methods: The MCSM Student Health Center is located in an NYC school with 1,619 high school students, of whom 1,203 have enrolled in the clinic as of 12/31/17. The clinic, which provides comprehensive care at no charge, is staffed by a pediatrician, social worker, medical office assistant, part-time health educator, and medical students. The student body is 51% male, 49% female, and 96% students of color. MCSM students interested in the health sciences were invited to apply to be SBHC Student Ambassadors. After submission of an application and an interview, three were selected to form a focus group to identify barriers to MyChart activation. Student Ambassadors activated their portals and provided insight on how to engage their peers to improve MyChart utilization. Under the guidance of the SBHC team, the Ambassadors designed a QI project.

Results: Under the clinic's standard procedure of printing out MyChart instructions and activation codes at most visits, only 9.7% went on to activate MyChart in the 90 days preceding implementation of the Ambassador's recommendations. Ambassadors identified several obstacles that they believe contribute to low MyChart utilization. These barriers included that patients are not aware of MyChart's existence, did not see value in having access to their health records, and were not aware of MyChart's features, like the ability to message their provider. Other obstacles were the need to enroll in MyChart using a web browser, not having access to a public computer to complete enrollment, and the need to get a unique access code from providers before enrolling. With these barriers in mind, the SBHC initiated a QI project as of February 1 with the goal of increasing MyChart utilization by 20% by the end of April. Results are pending as data are yet to be collected.

Conclusion: Student Ambassadors from the MCSM community collaborated in the development of a QI project to improve MyChart utilization by their peers. After implementation of this project, it is anticipated that MyChart utilization will increase 20% by completion of the two-month study period.

ABSTRACT #14

Resident Ambulatory Performance Improvement Curriculum Contributed to Enhanced Diabetes Control in the Elmhurst Primary Care Clinic

Authors: Lucy Gordon, Aafreen Hasan, Rand David

Purpose: The ACGME Program Requirements for Internal Medicine state that the educational program "must include evaluation of performance data for each resident's continuity panel of patients relating to both chronic disease management and preventive health care. Residents must receive faculty guidance for developing a databased action plan and evaluate this plan at least twice a year." In addition, "Residents must receive training and experience in quality improvement processes." At Elmhurst we implemented a curriculum for residents that included both assessment of continuity panel performance for Diabetes, as well as participation in clinic wide quality improvement initiatives directed toward the general Diabetic population.

Methods: During ambulatory block approximately 30 rotating PGY-2 and PGY-3 residents participated in a Performance Improvement project examining Diabetes outcomes in their continuity panels. Each resident submitted an Aim for Improvement statement for the outcome of increasing rate of A1C control. Concurrently, residents on block had monthly workshops with administration to discuss Patient Centered Medical Home and the use of Collaborative Care for managing chronic diseases. In these sessions administration and residents discussed clinic wide initiatives to improve outcomes in the Diabetic population, including population outreach, use of same day point of care A1C testing, enhanced nursing visits (including both in-person and telephone follow up), and use of Care Management resources. Both the Aim for Improvements statements and the monthly clinic metrics for A1C control (defined as A1C <8% in Diabetic patients 18-75) were reviewed to assess the impact of the curriculum.

Results: In June 2017 the rate of Diabetes A1C control in Elmhurst Primary care was 57%. During the time period of July – December 2017, there were 36,684 total patient visits to MPC, of which 7,889 (22%) were managed by residents. Approximately 5,000 of 30,000 currently active MPC patients have a diagnosis of Diabetes. 25 Aim for improvement statements submitted by residents were reviewed: common ideas for improvement that residents committed to using included enhanced patient education, increased use of nursing visits, POC a1c testing, inter-visit telephone follow up, and population outreach. By December 2017 the rate of A1C control clinic wide had increased to 60%.

Conclusion: Elmhurst Internal Medicine residents participated in a curriculum that included assessment of individual performance of Diabetes management in their continuity panels. In addition, they had workshops with administration to discuss clinic wide quality improvement initiatives for Diabetes. In a 6 month time period, during which residents saw 22% of all primary care patient visits, the rate of Diabetic patients with controlled HbA1C increased to 60% from a baseline of 57%.

ABSTRACT #15

Debriefing Program in the Pediatric Intensive Care Unit

Authors: Caroline Black, Christopher Strother, Lauren Zinns

Purpose: Clinical event debriefing (CED) is a brief, inter-professional conversation that occurs after resuscitation, procedure, or other change in a patient's status. CED allows team members to review the case, discuss what went well and identify opportunities for improvement. Current guidelines (American Heart Association, American Academy of Pediatrics, European Resuscitation Council) recommend routine use of debriefing in clinical practice. CED has been shown to provide critical reflection that promotes communication and understanding to enhance team performance. However, there are many challenges to accomplishing debriefings, such as unpredictability of when events occur and difficulty finding the time to do them due to high patient volume or excessive workload. Our objective is to assess improvement in perception of team performance and communication during critical events following implementation of a CED curriculum in the pediatric intensive care unit (PICU).

Methods: A prospective quality improvement study is currently being conducted in the PICU of Kravis Children's Hospital at Mount Sinai as of September 2017. Study participants include PICU faculty and nurses. PICU debriefing champions (1 attending and 2 nurses) underwent an 8-hour debriefing course consisting of lecture and simulation cases. The remaining PICU faculty and nurses will undergo abbreviated training sessions. Participants were given random tracking numbers to maintain anonymity and track survey responses. A pre-implementation survey was distributed to assess teamwork and the use of debriefing in the PICU. The survey included Team STEPPS Teamwork Perceptions Questionnaire (T-TPQ), an evidence-based questionnaire that focuses on five areas: team function, leadership, situation monitoring, mutual support and communication.

Results: A total of 49 surveys were distributed to PICU faculty and nurses. 41 surveys were included in the preliminary analysis (response rate: 84%). Of these surveys, 27% reported CEDs occurred half of the time, 41% reported a quarter of the time and 12% reported no CEDs. Only 22% reported that CEDs occurred immediately, 44% within 6 hours, 15% within 24 hours, and 34% within 6 days. PICU faculty led CEDs 85% of the time. Of those surveyed, 39% were comfortable with leading a CED, 21% were neutral and 40% were uncomfortable. Seventy one percent of PICU attendings were very comfortable leading CEDs versus 10% of nursing staff. Most respondents (92%) reported no CED training, yet 84% were interested in formal CED education. In the 5 teamwork categories of T-TPQ, responses were generally positive. Respondents scored somewhat agree (range 49-73%) with a minority reporting strongly agree (range 17-34%).

Conclusion: Perceptions of CED in the PICU varied, and while there were positive perceptions, teamwork and leadership could be improved. We hope to enhance teamwork, communication and increase the frequency of immediate CEDs in the PICU by implementing a CED program for all staff there.

ABSTRACT #16

The Sleep Hygiene in Hospital Project: SHH!

Authors: Daniela Mikhaylov, Puja Turakhia, Sharon Barazani, Dahniel Sastow, Hyung Cho, Michael Herscher

Purpose: Sleep deprivation has deleterious effects on health and recovery. Patients in hospitals often suffer from sleep deprivation due to environmental noise and staff interruptions. Although the American Academy of Nursing Choosing Wisely guidelines recommend not to "wake the patient for routine care unless the patient's condition or care specifically requires it," this guideline is often not adhered to. In this quality improvement project, we did a multifaceted intervention to improve the environment and promote sleep in hospitalized patients.

Methods: In an acute medicine inpatient unit at Mount Sinai Hospital, we used a multidisciplinary intervention that included: (1) an education campaign for staff through meetings and daily huddles, and use of signs/posters, (2) identification of unit champions from nursing and patient care advocates (PCAs), (3) delivery of a sleep package that included an eye mask, earplugs, lavender scent pad, and non-caffeinated tea. The sleep package was given by PCAs at bedtime with a script asking patients whether they would like the TV turned off, blinds closed, lights off, or anything else to improve sleep. The next morning, patients who received the intervention were given the Richards-Campbell Sleep Questionnaire survey, which asks patients to rate the quality of the previous night's sleep through 5 questions. We also reviewed patient responses to the HCAHPS satisfaction question, "During this hospital stay, how often was the area around your room quiet at night?" on a monthly basis. Pre-intervention data was collected from January 1, 2017 – June 30, 2017 and compared to post-intervention data collected July 1 – November 13, 2017.

Results: As compared to 49 pre-interventions surveys, scores increased on 4 of the 5 questions in 56 post-intervention surveys (question 1, 4.66 vs. 6.32, ($p=0.027$), question 2, 6.16 vs. 5.78, ($p=0.23$), question 3, 4.84 vs. 6.55, ($p=0.103$), question 4, 4.98 vs. 6.41, ($p=0.50$), question 5, 5.40 vs. 6.27, $p=0.314$). There was also a 15.3% increase in patients answering "always" to the HCAHPS question regarding quietness at night in the post-intervention period.

Conclusion: By implementing this non-pharmacologic intervention, ratings on 4 of the 5 sleep quality questions on the Richards-Campbell Sleep Questionnaire increased, with one demonstrating statistical significance. Additionally, there was an increase in the quietness at night HCAHPS question. Although these results are preliminary, this project could possibly serve as a model for other institutions to improve patient experiences.

ABSTRACT #17

A Novel Resident Clinical Dashboard Highlights Significant Trends in Clinical Performance that can Enhance Resident Feedback and Create Targeted Educational Interventions

Authors: Jean Sun, Arlene Chung, Nick Genes, Kathleen Li, Paul Peng, Donald Apakama, George Loo, Peter Shearer, Kaushal Shah, Lynne Richardson

Purpose: To develop an innovative Emergency Medicine (EM) Resident Clinical Dashboard to address the need for more reliable performance data in medical education by 1) displaying individual performance metrics; 2) providing a user interface that allows manipulation of data in real-time during in-person review sessions; 3) enabling residents to trend their progress and compare to class averages; and 4) allowing residency leadership to identify targeted educational interventions.

Methods: Resident and patient data were extracted from the EMR at a 4-year EM residency program. Analytics software was used to calculate 20 Key Performance Indicators (KPIs) that: 1) reflect nationally-reported quality metrics; 2) are supported by the ACEP Clinical Emergency Data Registry; or 3) represent the ACGME Milestones. These included 13 throughput, 5 sepsis, and 2 opioid metrics. KPIs were coded into an online Resident Clinical Dashboard that enables stratification by resident, training level and ED area. Descriptive and inferential statistics were calculated for all KPIs.

Results: We discovered significant trends across the 4 resident training levels (PGY1-4) in 5 months of data collected during academic year 2017-2018 (N=60 residents, 41,801 ED visits). Analysis of variance (ANOVA) showed evidence of statistical differences between training levels for all KPIs except in Admission Rate and Discharge Rate. Post-hoc analysis using Tukey's Range Test found the greatest significant differences when comparing PGY1s to PGY2/3/4s, with almost no significant differences when comparing PGY2s, 3s, and 4s to each other. Specifically, PGY1s had significantly lower average Patients per Hour compared to PGY2s (PGY1=0.34, PGY2=0.66, $p<0.05$), as well as significantly longer average ED Length of Stay (PGY1=462, PGY2=375, $p<0.05$). PGY1s also had a higher Observation Unit Rate compared to PGY4s (PGY1=6.6%, PGY4=3.9%, $p<0.05$).

Conclusion: Our Dashboard elucidated meaningful trends across resident training levels that can drive targeted educational interventions. We found that the greatest increase in throughput efficiency occurs between the PGY1 and PGY2 years, without significant further progression in the PGY2-4 years. This supports the case for focusing more attention and resources on the PGY1-PGY2 transition, an often neglected turning point in residency training. While we are cautioned by the limited ability of performance data to predict changes in patient outcomes, we anticipate that our Dashboard could provide data-driven support for medical education efforts in the future.

CURRICULUM: UME I

POSTERS 18 – 22

ABSTRACT #18

Impact of Teaching Modality on Knowledge Retention in the 2nd year Hematology Pathophysiology Course

Authors: Arielle L. Langer, Adam Binder, Eileen Scigliano

Purpose: There has been a movement in medical education away from traditional classroom lectures towards more interactive and self-directed learning methods such as team-based learning, flipped classrooms and e-learning modules to try and enhance learning and knowledge retention. The Hematology Pathophysiology Course uses multiple modalities of instruction to teach course content. Using different teaching methods to present similar content over time may improve retention by taking advantage of "spaced learning" and repetition. We plan to evaluate hematology medical knowledge retention over the five years following completion of the second year hematology pathophysiology course. We will assess whether specific teaching modalities or the use of multiple modalities, compared to traditional lectures alone, improve knowledge retention.

Methods: All second year medical students at the Icahn School of Medicine at Mount Sinai were offered the opportunity to participate in the study. Participating students will complete seven multiple choice quizzes: prior to starting the course, at the end of the course, at the end of their third and fourth years of medical school and at the end of each year of residency (up to 3 years). Students will also complete surveys at the end of the course, to assess the parts of the course they utilized and, at the time of each quiz, to assess if "rehearsal" or "re-learning" of course content occurred during the retention interval.

Results: Thirty-four students (24% of the second year class) have enrolled and completed the pre-course quiz. This suboptimal participation rate is an important obstacle to implementation of this study. As expected, we found a low pre-course level of knowledge of hematology, with correct answer rates likely attributable to chance. Immediate post-course quiz results are being collected and will be available for analysis shortly.

Conclusion: We demonstrated that pre-course knowledge was low across different topics covered in the course. We will assess if immediate post-course understanding varies by the teaching modality or use of multiple modalities. We identified a suboptimal participation rate as a limitation to the generalizability of our future results. Moving forward, we will collect data on long-term retention to inform the best use of limited instruction time.

ABSTRACT #19

Evaluating Outcomes of a Positive Psychology Elective on Learner Well-Being

Authors: Jordyn H. Feingold, Asher Simon

Purpose: This study examines the effects of involvement in a Positive Medicine course on learner well-being and aims to identify opportunities to prevent burnout and promote thriving. In this course, medical students, nurses, social workers, and researchers learned how to apply positive psychology techniques in their professional and personal lives, as well as with patients. Course content consisted of six 90-minute sessions, with interventions assigned as homework between sessions.

Methods: IRB exemption was obtained from the Mount Sinai IRB. Course participants included 11 learners (1 MS1, 7 MS2's, 2 research coordinators applying to medical school, 1 nurse practitioner). Pre- and post- (first and last day of course, respectively) measurements assessed burnout, well-being, resilience, personal growth, and life satisfaction, using the Maslach Burnout Inventory, PERMA Profiler, Connor-Davidson Resilience Scale, Personal Growth Initiative Scale, and Satisfaction with Life Scale. Qualitative questions assessed each learner's perceptions of course impact and potential future use of skills learned. Course topics include sessions on: Resilience, Relationships, Engagement, Vitality, Accomplishment, Meaning, and Positive Emotions. Data was input and analyzed using Microsoft Excel.

Results: Data from 11 participants revealed a statistically significant increase in perceived personal growth ($p<0.006$), a non-statistically-significant trend toward overall increases in life satisfaction ($p=.77$) and resilience ($p=.16$), and a trend toward decreases in negative emotions (subset of PERMA Profiler) ($p=.68$). 92% of participants reported that they are currently applying positive interventions learned in class to their personal or professional lives, with 100% reporting that they plan to use these newly-learned skills in patient care. The small sample size of this intervention limits the generalizability of our findings, and further research is warranted to study these effects in a larger sample size.

Conclusion: The Positive Medicine course equipped learners with new knowledge, skills, and attitudes designed to apply principles of well-being in their own personal lives and in patient care. A significant increase in personal growth revealed that learning these tools and interventions may enhance a medical professional's personal sense of autonomy, which is critical for sustaining wellness through the burdens of medical training and practice. A trend toward improved overall life satisfaction and resilience, and a trend toward declining negative emotions further the importance of this intervention. Further research should examine the durability of this intervention's uptake in this population over time, its effects within a larger population, and determine which individual aspects (of both the intervention and the population) are responsible for the most significant effects.

ABSTRACT #20

Preseason Pediatrics Curriculum: Enhancing Clerkship Preparedness and Exploring Value of Resident-Mentorship

Authors: Alefiyah Malbari, Benjamin M. Laitman, Suzanne Friedman, Scott Moerdler, Kathleen Gibbs, Reena Karani

Purpose: Pre-clinical medical students have limited exposure to pediatrics & resident mentorship. There is no description in the literature of resident-led pediatric curricula for preclinical students although near-peer resident mentorship has been shown to foster learning through cognitive congruence. We created an innovative resident-taught curriculum for Year 1 students called Preseason Pediatrics (PSP).It teaches pediatric-specific knowledge & clinical skills in resident-led monthly didactic sessions & hands-on clinical experiences. We studied how PSP affects students' clerkship preparedness & comfort with pediatric patients & assessed student perceptions of mentoring by residents.

Methods: Three iterations of PSP were run as an elective experience for Year 1 students from 2013-2016.Post-PSP surveys were completed. All incoming 2015-16 pediatric clerkship students completed a survey & participants (2013-14 PSP) & non-participants were compared. Perceptions on clerkship preparedness, comfort with pediatric patients & resident mentorship were assessed with 5-point Likert scales ranging from not at all or very negative (1) to extremely or very positive (5).Differences between Likert scores were assessed using chi-square and Fisher's exact tests; $p<0.05$ was considered significant.

Results: Over 3 years, 119/420 Year 1 students participated in PSP & 99/119 completed the post-PSP survey (83% response rate).Of these, 86.9% (n=86/99) reported feeling more prepared for the pediatric clerkship after than before PSP. In 2015-16, 119/140 incoming clerkship students completed the survey (85% response rate).46% (n=49/107) were PSP participants and 54% (n = 58/107) were not;12 surveys were incomplete and not analyzed.37% of PSP participants reported higher comfort (4 or higher on Likert scale) with pediatric patients prior to their clerkship compared to 10% of non-PSP ($p=0.009$).Of PSP participants who responded to mentoring questions (n= 19/49),100% had a positive experience with a resident mentor & noted mentor competence in teaching clinical topics & discussing career plans/life goals. Non-PSP (n=18/58) who had resident mentors outside of PSP rated these items lower but the difference was not statistically significant.

Conclusion: PSP is a novel curriculum that appears to improve students' perceived clerkship preparedness & comfort with pediatric patients. A curriculum mentored by residents is innovative. Future work includes a formal qualitative analysis of the students' perceptions of resident mentorship.

ABSTRACT #21

Use of a Quick Multimedia Learning Module Facilitates Knowledge Acquisition of Cardiac Physiology

Authors: Joe-Ann Moser, Gale Justin, Rainier Soriano

Purpose: As activation of prior knowledge is a critical step in learning, review becomes an integral part in understanding and retention. Due to the comprehensive quality and fast-paced nature of the medical school curriculum, there are limited opportunities within the course structure for students to review previously covered topics. This in turn increases the challenge medical student's face when learning subsequent material. Current learners often utilize short, commercially available media-based learning objects for the purpose of review. Although adoption of these technologies has been increasing among students, traction among faculty educators has been slow because such review materials are not tailored to specific curricula being taught. This project aims to leverage popular emerging technologies to explain challenging topics in first-year physiology, in such a way that they are tailored to the ISMMS curriculum and can be useful for subsequent learning.

Methods: Topics for inclusion were solicited from the Year 1 physiology and Year 2 cardiology course directors and selected through an analysis of the content matter of USMLE Step 1 question banks. The multimedia was then created by the research team, with help from our instructional designers and medical illustrators. Iterative content revisions were made through educator and course director feedback. The modules were then made available to the medical students as an optional cardiology resource through the Blackboard LMS. Subjective and objective measures were collected with an anonymous pre- and post-intervention survey. Recall and knowledge application were tested using questions adapted from a Step 1 question bank. Student attitudes regarding the intervention were also assessed on a 5-point Likert scale.

Results: Preliminary results show that 45 (32%) of 141 total students accessed the optional nine-minute cardiac cycle video. Twenty-one (47%) completed the pre- and post-surveys in their entirety, with the rest answering at least one of the questions. The mean percent correct on the knowledge questions increased from 40% pre- to 93% post-intervention. A majority of respondents strongly agreed/agreed with statements assessing enjoyment (82%), understandability (90%), and usefulness (86%) of the review module. Furthermore, 76% would recommend it to other medical students and 79% strongly agreed/agreed that use of similar online modules should be encouraged in other medical school courses.

Conclusion: Initial data in this project suggest that use of quick, independent multimedia learning modules to review concepts can facilitate recall, which aids the application of previously learned knowledge to more challenging topics. Due to these results, we have developed a second cardiology learning object, and are expanding this form of learning to other second-year courses.

ABSTRACT #22

Development of an Evidence-Based Medicine Journal Club to Increase Medical Student Exposure to Clinical Research Prior to Residency

Authors: Katherine Phillips, Megan R. D'Andrea, Daniel Leisman, Taylor Miller, John Power, Elizabeth Gromet, Kastaur Shivani, Parth Kothari, Mohammad Hissourou, Oren Cohen, Andrew Coyle

Purpose: Evidence-based medicine (EBM) is becoming the dominant method for teaching at all stages of medical education. When taught effectively, EBM provides students the skills to efficiently search current literature and integrate their findings into patient care. Journal Club (JC) has been shown to be a valuable asset for improving EBM knowledge and skills in various medical settings. In 2017, an EBM JC was founded at ISMMS and was organized according to the central tenants of EBM: formulating clinical questions, translating these into an appropriate literature search, critically assessing this evidence, and applying it to patient care. A needs assessment measured students' perceptions of their current exposure to EBM in the medical student curriculum, their interest in participating in JC, and desired skills to be gained from JC.

Methods: The needs assessment was emailed to all third- and fourth-year ISMMS MD students in January 2017. It contained 23 questions, including demographic questions and questions designed to assess students' opinions on the presence of EBM in their medical education and their interest in learning about EBM in a JC setting. Survey items assessing the presence of EBM in the MD curriculum were scored on a 5-point Likert scale with 1 representing "strongly disagree" and 5 representing "strongly agree." Questions assessing student preferences on JC logistics were multiple-choice questions. Please note we are currently in the process of obtaining IRB exemption which will be completed before we present this data.

Results: There were 41 respondents to this survey (14.8% response rate), 25 third-year students (61.0%) and 16 fourth-year students (39.0%). In evaluating their current medical education, the majority of respondents agreed or strongly agreed that there is a lack of training in how to ask clinical research questions (61.9%), critique clinical research (73.8%), apply clinical research to patient care (61.9%), and present clinical research (64.3%). The vast majority of respondents reported they would attend JC (88.1%) and would like it to focus on EBM topics as well as key clinical trials that guide medical decisions. The most desired skills to be learned from JC were knowledge of research that underlies medical decisions (90.5%), ability to apply research to patient care (83.4%), and ability to critique clinical research (78.6%).

Conclusion: There is a clear need for student exposure to clinical research prior to residency. Furthermore, there is overwhelming student support for a JC to develop EBM skills further than what is currently provided in the curriculum. The current study provides valuable information on how JC should be structured to fit students' goals. As the curriculum is developed, it will be subject to short-term and long-term evaluation to further guide its development and assess its success.

CURRICULUM: GME I

POSTERS 23 – 28

ABSTRACT #23

A Longitudinal Nutrition Counseling Curriculum for Internal Medicine Residents

Authors: Colin Feuille, Brijen J. Shah, Andrew Coyle

Purpose: Obesity is epidemic in the US, impacting 38% of the population, and is associated with chronic medical conditions which imposing a large burden on our healthcare system. While the US Preventive Services Task Force recommends screening all adults for obesity, and guidelines recommend strategies for weight loss, surveys have shown few internal medicine residents feel adequately trained to provide nutrition counseling. Our goal was to implement a longitudinal curriculum with multiple components to improve medicine residents' knowledge, attitude, and skills relating to nutrition counseling.

Methods: We developed a curriculum consisting of three 60 minute sessions, with 8 weeks between each. Participants were 44 PGY-2 internal medicine residents from a single program, divided into 4 groups. Topics included fundamentals of nutrition and principles of behavioral counseling and motivational interviewing, and incorporated didactic elements, role play scenarios, and an assignment to counsel a primary care patient and follow up 8 weeks later. We surveyed learners before the second hour and at the conclusion of the curriculum to assess residents' knowledge and attitude towards nutrition and their confidence in nutritional counseling. Frequency of encounters in which residents performed nutritional counseling was scored on a self-reported 1-5 scale, with 1 being 0-20% of encounters and 5 being 81-100%. Questions assessing attitude and confidence were scored on a 1-4 Likert scale, with 1 being strongly disagree and 4 being strongly agree. Pre- and post-tests were linked by a unique identifier code, allowing paired samples t-test for analysis.

Results: 41 of 44 (93%) residents completed the pre-test, and 35 of 44 residents completed the post-test (80%). The median ranges of self-reported prior instruction on nutrition and on behavioral counseling were both 5-9 hours. Residents reported a significant increase in percent of encounters in which they engaged in nutritional counseling after the curriculum (scores = 2.1 pre, 2.6 post; $p = 0.003$). They reported significant increase in comfort discussing nutrition and weight loss (3.0 pre, 3.3 post; $p = 0.02$) and confidence in their behavioral counseling and motivational interviewing skills (2.6 pre, 3.0 post; $p = 0.005$). Finally, residents more strongly prioritized nutritional counseling with obese patients (2.8 pre, 3.2 post; $p = 0.008$). Residents appreciated the opportunity to apply the new skills with their primary care patients, and reacted positively to the experience of receiving feedback from their patients on the impact of their counseling on the patient's health goals.

Conclusion: Internal medicine residents have had little prior training in nutrition and behavioral counseling. A short curriculum was well-received, and resulted in significant increases in confidence in discussing nutrition and counseling obese patients on weight loss.

ABSTRACT #24

Talk It Out: A Novel Use of Training Groups with Emergency Medicine Residents

Authors: Moira Carroll, Arlene S. Chung

Purpose: In response to the alarming rates of physician burnout, in July 2016 the ACGME updated the Common Program Requirements and now mandate residency programs provide services and resources to support resident well-being. To address this requirement, we developed training group sessions for Emergency Medicine (EM) residents to mitigate burnout and enhance resilience. Training groups are small groups in which participants learn through their interaction with each other while processing mutual experiences. Training groups have traditionally been used in Psychiatry residency programs to help residents process secondary traumatic experiences and emotions. To the best of our knowledge, this is the first use of training groups for EM residents.

Methods: We collaborated with the Department of Psychiatry to design 12 60-minute sessions over the academic year during weekly resident conference. Residents are divided into groups by PGY level. Each training group is led by one psychiatrist and one psychologist who remain with that group for the entire year. All discussions are confidential and no information is shared with the residency leadership unless a risk of harm is identified. The faculty pair initiates each session and then 1) continues discussion from prior sessions, 2) prompt new discussion, or 3) allow residents to determine the content. Through targeted discussion grounded in the fundamentals of cognitive behavioral theory, faculty help residents to identify stressors and sources of burnout specific to each class year's specific needs. Once stressors are identified, the group works to develop approaches that build resilience.

Results: Residents were assessed using two validated tools, single item-measures of emotional exhaustion and depersonalization to measure burnout and the Connor-Davidson Resilience Scale. A small sample of initial data shows 20% of respondents reported feeling burned out from work a few times a week. When asked about feeling callous towards people at work, 17.8% responded every day, 15.5% report a few times a week. We will assess the effectiveness of the training groups by comparing the results from the survey prior to implementation compared with survey after completion of the series in July 2018.

Conclusion: Integrating training groups into an EM resident curriculum has not previously been described in the literature. This innovation allows EM residents, under the guidance of trained psychiatrists and psychologists, to fight burnout and to develop resilience to stressors during residency training.

ABSTRACT #25

The OCT Aid App: A Mobile Application Educational Tool for Intra-Coronary Optical Coherence Tomography

Authors: Jossef Amirian, Yuliya Vengrenyuk, Naotaka Okamoto, Surbhi Chamaria, Samit Bhatheja, Samin K. Sharma, Annapoorna Kini

Purpose: To develop a mobile application for teaching intra-coronary optical coherence tomography (OCT) with the goal of making it easy to understand for physicians all over the world. There is rising interest among interventional cardiologists to learn OCT given it's ability to help with image analysis, determination of plaque characteristics, visualization of intra-coronary pathology and stent optimization. Mount Sinai Heart is a global leader within the field of interventional cardiology; the myriad of cases and pathology which are seen at The Mount Sinai Hospital make it the perfect center to educate medical professionals within this field.

Methods: To teach the principles of intra-coronary imaging and the technique of how to perform OCT. To educate users on how to interpret various notable and commonly seen examples with labeled images and explanations. Finally, we will have a link to an interactive portal where users can test their knowledge of the material via cross sectional and longitudinal OCT images, videos, 3D OCT and corresponding angiography findings. These multiple choice questions are accompanied by detailed explanations and references. The portal will also offer suggested reading material with key trials and the latest published literature which will be constantly updated so that users can use this mobile application to stay up-to-date as the field evolves.

Results: An educational tool that can be used on-the-go all over the world. This mobile application is the first of its kind within the rapidly expanding field of intra-coronary imaging and it gives medical professionals globally exposure and access to cutting edge technology they would not be able to receive otherwise.

Conclusion: As the field of intra-coronary imaging expands, so too will the use of optical coherence tomography. There is a need for a means to educate medical professionals on how to perform and interpret OCT. This mobile application will meet those needs and will reach a global audience who otherwise may not be able to obtain the exposure and instructions needed to properly use OCT. In turn, patients all over the world could potentially benefit from this technology as operators will be able visualize and analyze anatomy and optimize interventions in ways they could not before.

ABSTRACT #26

Advanced A-B-Cs, Easy as 1-2-3

Authors: Moira Carroll, Clark Owyang, Colin Pesyna, Sharaf Khan, Peter England, Suzanne Bentley

Purpose: In the authors' Emergency Medicine residency program, resuscitation and emergency critical care shifts are exclusive to postgraduate year 2 (PGY-2) residents and above. The transition into emergency critical care shifts is a challenging experience that demands specialized knowledge, procedural competence, and command over novel protocols and equipment. This simulation based course was designed to equip rising PGY-2 emergency medicine residents with the procedural skills, knowledge and confidence to safely transition into this critical role.

Methods: The simulation based course was designed to teach rising PGY-2 residents the advanced ABCs of resuscitation. The course divided its content into three stations - Airway, Breathing and Circulation. Each station was led by one to two senior residents utilizing simulation equipment including high fidelity mannequins, part task trainers (e.g. central line simulators, ventilators with attached lung units), and state-of-the-art AV-equipped simulation rooms featuring the actual equipment used within our emergency resuscitation areas. The educators integrated these resources into high yield, interactive teaching sessions designed to convey these advanced techniques; learners could further drive the clinical scenarios based on their interests and needs. Prior to this intensive course, learners completed a survey designed to assess their experience and comfort with several domains of critical care knowledge and procedures. The survey data was utilized to specifically tailor the educational objectives for each station.

Results: Prior to the educational session, learners rated their comfort with critical care procedures via a Likert Scale. The responses drove the tailoring of the educational objectives to meet the learner's needs. For example, respondents reported "Not Comfortable At All" on a modified Likert scale 50% of the time for Setting Up Bipap, 50% of the time for Troubleshooting a Vent and 42.29% for placing a chest tube. The course was designed with plan for future reassessment of the learner's comfort 6 months post-course after completing the transition into their critical care shifts.

Conclusion: The transition of junior residents to the care of critically ill patients in the Emergency Department is an overwhelming experience. High fidelity simulation is an engaging educational environment that assists in the acquisition of the knowledge and procedural skills of resuscitation, and may enhance the care of the critically ill along with the comfort of resident providers.

ABSTRACT #27

Aesthetic Training in Ophthalmology Residency

Authors: Laiyin Ma, James Chelnis

Purpose: To shed light on resident aesthetics exposure and other factors that may affect interest in oculoplastics.

Methods: A survey delineating resident preparedness in aesthetic procedures (injection filler and neurotoxin) was sent to program directors of ACGME-accredited ophthalmology residencies in May 2017

Results: 33 programs responded to the survey. In looking at the hours of aesthetic training programs provided, 12% reported none, 61% 1-4 hours, 21% 5-9 hours, and 6% >10 hours. Most programs had 2-3 full-time (57.6%) oculoplastics faculty. Part-time faculty ranged from 27.3% without any, 24.3% with 1, 36.4% with 2-3, and 12.1% >4. No significant correlation was found between hours of training and number of part-time ($p=0.97$) or full-time ($p=0.29$) oculoplastics attendings. 36.4% of residencies offer skills transfer sessions with 66.7% having industry sponsorship. Of the programs that provided >5 hours of aesthetics training, 77.8% was industry-sponsored. 36.4% of programs allow residents to inject filler, as compared to 72.7% with neurotoxin. 21/23 programs with ASOPRS applicants in the last 3 years reported >1 match. Programs with 2-3 full-time oculoplastics specialists were more likely to report successful matches than programs with fewer (66.7% vs. 23.8%). 91.3% of programs provide some aesthetics training. Of these programs, 47.4% allow residents to inject fillers and 78.9% allow residents to inject neurotoxins.

Conclusion: A majority of matched ASOPRS applicants have exposure to aesthetic procedures during their residency. Programs with 2 or more full-time oculoplastic surgeons were more likely to match residents than programs with fewer. The role of industry-sponsored resident education cannot be overlooked. Skills transfer sessions were more likely to be provided if they were industry-sponsored; furthermore, programs with such events were more likely to provide more aesthetics training than programs without. Residents are twice as likely to have experience injecting neurotoxin as filler, possibly reflecting the functional uses of neurotoxins. Of programs with ASOPRS applicants, 91.3% matched at least 1 resident in the last 3 years. Many of these newly-matched fellows injected neurotoxin and filler as a PGY-2. A limitation to this study is the small sample size. The average ASOPRS match rate from 2012-2015 was 57.6% (SFmatch.com). Our sample size reported a higher match rate, perhaps reflecting response bias in that programs with more resident aesthetics training and/or with successful match results were more likely to respond.

ABSTRACT #28

Developing a Procedure Curriculum for Pediatric Residents

Authors: Jennifer Bellis, Dahan Nessy, Jennifer E. Sanders

Purpose: Procedural training is an integral part of any residency program. Repetitive and deliberate practice is needed to develop these skills. Pediatric interns and residents rotating through our emergency department (ED) are expected to develop basic minor procedural skills. This is not only an ACGME requirement, but important for many residents in their future career paths. Additionally, as resident's progress, they are expected to perform minor procedures with minimal supervision. The goal of the workshop is to allow for frequent focused practice of procedures, with initial focus on suturing.

Methods: This project is a pilot of a proposed curriculum with the goal to integrate into monthly to bimonthly workshops for residents in the coming year. Pilot workshops will take place over the next few months. The workshop will consist of a pre-course knowledge assessment and assessment of suturing skills. This will be followed by a short lecture, demonstration, and directed practice. Finally, there will be a post course assessment of course material, knowledge and suturing skills.

Results: Results will be presented on both a pre and post-course assessment of knowledge and self-confidence. We have also designed a checklist to evaluate proficiency at placing a suture before and after the workshop.

Conclusion: The goal is to demonstrate an improvement in knowledge, attitudes and skills after the workshop. A secondary goal is to evaluate the resident response to the curriculum.

CURRICULUM:
UME II

POSTERS 29 – 33

ABSTRACT #29

The Leaders in Health Policy Program: A Novel Approach to Leadership Training and Health Policy Experiential Learning in Medical Education

Authors: Charles Sanky, Christian Stevens, A. Taylor Thomas, Benjamin Graif, Taylor Miller, Jessica Rizzuto, David L. Reich, Trevor Pour, Andrew Coyle

Purpose: Healthcare is intimately intertwined with external economic and political forces, but health policy education and leadership skills are lacking in most traditional medical school curricula. At the Icahn School of Medicine at Mount Sinai, these subjects have only recently been introduced, but not until the fourth year. To address this need, students created and implemented the Leaders in Health Policy Program. Through leadership development, health policy classes, physician mentorship, and project support, this program prepares future physicians with the knowledge and tools necessary to proactively engage with health policy.

Methods: With a $9,000 AΩA Medical Student Service Leadership Grant, the Leaders in Health Policy Program accepted 20 medical students since 2016, 10 each academic year. Students participated in two semester-long courses featuring weekly didactic and interactive sessions. "The American Healthcare System" introduced healthcare forces and key stakeholders, and "Tools for Physician Advocates & Leaders" equipped students with essential skills to advocate for patients. Prominent speakers included a hospital president, former FDA associate commissioner, MacArthur Fellow, and other healthcare leaders. Additionally, students led journal clubs, participated in leadership workshops, and shadowed physician mentors who elucidated health system effects on patient experiences. Grant funding was awarded for capstone projects.

Results: Program participants lend health policy perspectives to medical school classes and lead an annual health policy day. Notably, they facilitated a conversation with Mount Sinai's CEO and President Dr. Kenneth Davis, attended by 120 students and faculty. Course sessions open to Mount Sinai affiliates regularly attracted over 30 medical students, graduate students, and faculty beyond the program. Course evaluations revealed that students enjoy the courses and clinical experiences, feeling they can apply lessons learned through practical experiences. Students (90%) received grant funding to pursue capstone projects, spanning bundled payment models, federal health legislation, cancer patients' care goals, and homeless patients' healthcare needs. Current projects concern investigating hospital discharge bottlenecks and nonclinical factors affecting hospital flow, examining the efficacy of a transformative clinic for "super utilizers," and developing a health policy blog.

Conclusion: The Leaders in Health Policy Program demonstrates a new model for integrating policy and leadership into medical students' curricula and future careers. It provides unprecedented opportunities for students to engage with and contribute to the healthcare landscape. Further assessment of this program's value in developing health policy knowledge and leadership skills will support continued endeavors to enhance medical education. Future efforts will also measure the career effects of participating in a health policy and leadership track.

ABSTRACT #30

From Individual to Team Member: Enhancing Anatomy Education Through Student-led Team Dynamics Initiatives

Authors: Charles Sanky, Daniel Newman, Mateo Cruz, Jeffrey Laitman, Robert Fallar

Purpose: In anatomy education, reliance upon fellow classmates and more senior students sharing similar experiences can foster academic success and prepare students for the emotional intensity of cadaver dissection. The first course at the Icahn School of Medicine at Mount Sinai, Structures, requires medical students to put collaboration into practice. Because of the emotionally and academically challenging nature of the Structures course, students must rely on their teams and supportive peers for psychosocial wellness and academic success. Based on prior experience with the Structures course, students developed a team-focused orientation session and enhanced peer support. Such efforts sought to foster team cohesion and achievement of learning outcomes, thus improving anatomy education of medical students.

Methods: First-year medical students (n=140) participated in a one hour, student-developed and led team dynamics session during Orientation week, immediately before Structures began. During this new session, students met their teams for the course, collaborated in team activities, and discussed how teams foster psycho-emotional wellbeing and academic performance. During Structures, second-year medical students conducted review sessions and debriefed Structures teams regarding their performance. Self-reported team assessments (n=81) throughout the course utilized seven-point Likert scales, and a final course evaluation (n=74) used free-text responses and five-point Likert scales. These assessments gauged team performance and efficacy of student-led initiatives.

Results: Students reported that the orientation session was helpful before the Structures course began, and subsequent course evaluations revealed continued consciousness about the team dynamics they experienced. Team self-assessments revealed that team dynamics tended to improve by end of the course, especially along domains of conflict resolution ($p=0.017$) and learning and development ($p=0.035$). At the end of Structures, most respondents (71/74, 95.95%) expressed feeling more comfortable working as part of a team. Course faculty and students qualitatively expressed less criticism of laboratory experiences and teamwork than in previous years.

Conclusion: These findings suggest the importance of peer-led team dynamics initiatives in anatomy education and in encouraging collaboration. This approach toward medical education also holds broad implications for patient safety, quality of care, and health improvement, areas in which collaboration serves a major role. Further investigation correlating academic performance on team practical exams and quality of team collaboration may underscore these findings. Across all four years of medical education, an umbrella curriculum of team dynamics is being developed to prepare students for their future roles as physicians. Student-driven curricular enhancements in team dynamics, starting at the beginning of medical school, may facilitate fellow students' success in anatomy education and beyond.

ABSTRACT #31

Clinical Dermatology Education through Independent Multimedia Learning Modules

Authors: Garrett Desman, Joe-Ann Moser, Gale Justin, Rainier Soriano

Purpose: Since the skin is the only organ we can readily see with our eye, it provides a window into the body with respect to systemic inflammatory diseases and familial syndromes. Teaching Clinical Dermatology in parallel with other organ system-based courses during the first and second years through online multimedia learning modules will synergistically reinforce each discipline's core learning materials.

Our project utilizes succinct, clinical vignette-style multimedia modules that heavily emphasize dermatologic vocabulary and clinical-pathologic correlation. The aim is to infuse first and second year courses with the appropriate dermatologic concepts as well as to produce a comprehensive Dermatology course before third-year clinical rotations.

Methods: Currently this series of fifteen highly interactive clinical vignette-style modules encompass the cutaneous manifestations of systemic disease as they relate to gastroenterological and hematologic entities. The modules compel students to identify salient clinical and histopathological findings that pertain to the final diagnosis. Short discussions of the differential diagnosis and appropriate treatment are incorporated. An introductory video covering the fundamental principles of Dermatology has been provided to easily access the core concepts of clinical-pathologic correlation. An illustrated glossary of clinical and histopathological terms is supplied for cross-referencing key descriptors while reviewing the modules. To promote self-directed learning the modules are available to students as an optional resource through the Blackboard LMS.

Results: Currently this series of fifteen highly interactive clinical vignette-style modules encompass the cutaneous manifestations of systemic disease as they relate to gastroenterological and hematologic entities. The modules compel students to identify salient clinical and histopathological findings that pertain to the final diagnosis. Short discussions of the differential diagnosis and appropriate treatment are incorporated. An introductory video covering the fundamental principles of Dermatology has been provided to easily access the core concepts of clinical-pathologic correlation. An illustrated glossary of clinical and histopathological terms is supplied for cross-referencing key descriptors while reviewing the modules. To promote self-directed learning the modules are available to students as an optional resource through the Blackboard LMS.

Conclusion: This Dermatology Online course was designed to fill an unmet need in the ISMMS curriculum in order to prepare students for standardized examinations and clinical encounters. We plan to create subsequent modules to correlate with upcoming pathophysiology courses.

ABSTRACT #32

Lessons from Implementation of Team Based Learning in the Second Year Hematology Curriculum

Authors: Arielle L. Langer, Eileen Scigliano

Purpose: Team-based Learning (TBL) is an increasingly popular educational strategy. The focus of TBL is on application of course content, which is aligned with the need to apply content for clinical scenarios in successful medical practice. In TBL, students begin with an individual readiness assurance test (iRAT) then review the same material as a team in the group readiness assurance test (gRAT). After the gRAT is complete, the material is review with the entire section. This is followed by the application activity where student discuss more complex questions in their teams and then finally review the application activity with the entire section. We added a TBL session on thrombosis and anticoagulation management to the second year hematology curriculum.

Methods: We explored the successes and obstacle of the implementation of this TBL session. The course director monitored the TBL session to observe issues in real time. After the session was complete a debriefing was held with the four TBL sections leaders to discuss what went well and areas for improvement. We also received unstructured feedback from participating students.

Results: Students reported a greater depth of understanding than after traditional lecture. Reasons why incorrect answers were incorrect and application of medical facts to previously unseen scenarios were among the strengths observed. We identified technical, timing, and content based areas for improvement. Technical limitations included some students accidentally being aware of whether they answered iRAT questions correctly prior to completion of the gRAT and inability to move on to the gRAT when done early with the iRAT. Future sessions would benefit from completing the iRAT prior to the session to allow that time to be used for greater discussion of the application activity. After the session, feedback from the section leader identified questions in the iRAT/gRAT that would be better suited to the application activity and vice versa due to complexity of questions and answer choices.

Conclusion: We added a TBL session to the second year hematology curriculum. While we consider the implementation successful, we were able to identify several lessons that could be used to improve future sessions in this or other curricula.

ABSTRACT #33

Combined Psychiatry Residency and PhD Training at Mount Sinai

Authors: M. Mercedes Perez-Rodriguez, Asher Simon, Ronald Rieder, Rene Kahn, Antonia New

Purpose: Recent advances in genetics and neuroscience set an ideal stage for groundbreaking translational research in psychiatry. While PhD scientists make enormous contributions in these fields, physician scientists with MD and PhD training are uniquely capable of linking basic science findings in genetics and neuroscience to the clinical phenomenology of psychiatric illness, bridging the extremely challenging gap between basic neurobiology and clinical disease. It is clear that programs such as the federally funded MSTP MD/PhD programs have an important role in training physician scientists capable of making breakthroughs; however, such programs are not producing enough MD/PhD psychiatrists and have some limitations. Traditional MD/PhD programs divide scientific training from clinical training and leave a large gap of time (3-6 years) between PhD completion and further post-doctoral research training. Moreover, the field of PhD training is often unrelated to the clinical residency and very few MD/PhDs (5-6%) choose a residency field related to psychiatry or neuroscience.

Methods: To address these challenges, in 2013 we developed a novel and efficient 7-year training program designed to produce fully-trained psychiatrists who simultaneously complete psychiatry residency and PhD training in Neuroscience or Genomic Sciences. This program is funded by an R25 grant from the NIMH.

Results: Since launching the program in 2013, we have recruited 5 outstanding residents for this program and filled all available slots every year.

Conclusion: It is feasible to combine psychiatry residency and PhD training in neuroscience or genomics in a single, 7-year program.

GLOBAL HEALTH

POSTERS 34 – 36

ABSTRACT #34

Assessing Immediate and Longitudinal Retention of a First Responder Course for Haitian Medical Students

Authors: Meghana Eswarappa, Isaiah Levy, Alison Celello, Kieley O'Connor-Chapman, Sandro Cerome, Randy Sorge, Dinali Fernando

Purpose: Medical Students for Haiti (MS4H) is a student-run organization at Icahn School of Medicine at Mount Sinai that conducts an annual first responder course at Universite Quisqueya (UniQ), a medical school in Port-au-Prince, Haiti. The four-day course, which was developed utilizing the principles of Kolb's experiential learning theory, used a "near-peer" teaching approach to fill a curricular-gap by certifying Haitian medical students in basic life support CPR and as first responders. We sought to evaluate students' retention of course material immediately and 12 months after course completion.

Methods: Student's knowledge was assessed by re-administering the pre-course 20-question multiple choice test immediately post-course and again at twelve months. Pre-, immediately post-, and twelve-month post-course test scores were compared using paired t-tests. Scores were analyzed using Microsoft Excel Data Analysis statistical software.

Results: Sixty students participated in the course. Of the 60 original participants, 11 (18%) completed the 1-year retention test. There was a statistically significant difference between pre-course (46.3%) and immediately post-course (83.4%) test scores of the 60 students ($p < 0.01$), as well as of the sub-group of 11 students who returned (48.2% pre-course vs 82.3% immediately post-course; $p < 0.01$). A significant difference was also noted between pre-course (48.2%) and 1-year retention (59.5%) scores for the 11 returning students ($p < 0.02$).

Conclusion: This data indicates a significant increase in knowledge immediately post-course. The low power of the twelve-month reassessment limits our ability to make any concrete conclusions, but this data suggests that there is adequate retention of knowledge at twelve months as well and supports our hypothesis that a four day curriculum is both sufficient and effective in sustaining knowledge long-term.

ABSTRACT #35

Onward and Upward: A Review of the State of Health and Healthcare in Haiti and Opportunities for Future Growth

Authors: Jordan A. Francke, Dominique Pean, Alison Celello, Allie Lockwood, Meghana Eswarappa, Randy Sorge, Dinali Fernando

Purpose: Haiti, the second most populous Caribbean nation after Cuba, is currently facing a multiplicity of health challenges. In January 2010, Haiti experienced a catastrophic 7.0 Richter scale earthquake that destroyed much of its infrastructure and leveled 50 healthcare facilities, including the main public tertiary care hospital in Port-au-Prince. One area of the healthcare system in Haiti that has particularly been lagging is access to emergency medical services, especially for pregnant women and newborns. Maternal mortality in Haiti is the highest of any country in the Western Hemisphere: for every 270 live births an estimated 35 mothers will die during or shortly after delivery. Many of these deaths are largely preventable with adequate, timely, high-quality emergency obstetric and neonatal care. Medical Students for Haiti (MS4H) is a non-profit organization founded in 2013 by a team of medical students in response to increased need for healthcare infrastructure in Haiti. Since 2014, MS4H has sent a group of Icahn School of Medicine at Mount Sinai (ISMMS) students to Haiti to partner with Université Quisqueya (UniQ) to conduct a 5-day course which certifies Haitian medical students in basic life support CPR as first responders. This study aimed to assess the need for including training in obstetric care among the UniQ medical students who participated in the MS4H training program in 2016.

Methods: At the conclusion of the MS4H training program in 2016, a 13-item multiple-choice questionnaire was administered to UniQ students to conduct a needs assessment of obstetric care and training for medical students in Port-au-Prince. Statistical significance between genders was evaluated for binary questions only using Fisher's Exact Test, and not for non-binary questions due to small sample size. Statistical analysis was performed using SPSS software Version 24 (IBM, Armonk, New York).

Results: In total, we received 56 responses, from 18 male (32%) and 38 female (67%) medical students. Results indicated that only 34-38% of students had received formal or informal obstetric training (with female medical students reporting significantly more informal training than males). The most frequent obstetric complications witnessed by students during pregnancy, delivery and post-delivery were nausea, prolonged labor, and infections respectively. The most common primary healthcare providers for patients during pregnancy, delivery, and post-delivery were physicians with nurses, midwives, and community members lagging far behind. Ninety eight percent of respondents expressed interest in MS4H incorporating obstetrics into their near-peer training program.

Conclusion: Data from this study suggest a need for and interest in bolstering Haitian obstetrical medical education, with the opportunity to enhance sustainability and independence of Haitians involved in perinatal medical care, particularly in times of national crisis.

ABSTRACT #36

Equipping and Activating Global Health Change Agents: A Competency-Based Framework

Authors: Alyssa Smaldino, Natalie Privett

Purpose: Due to persistent inequities, changing demographics, and increasingly complex health systems, global health challenges are more daunting than ever before. In nearly all countries, the health professionals of tomorrow must overcome dysfunctional and inequitable health systems in order to create healthy people, communities and societies. Training of the health workforce has not adapted to this reality. There is a need for training that equips and activates global health change agents. We define global health change agents as individuals with the capacity to undertake purposeful action for change in systems of health throughout the world.

Methods: Our research consists of a literature review of global health-related competencies and identification of gaps related to competencies for change agents. Given the complexity of health systems, the competencies needed for global health change agents span sectors such as global health leadership, systems science, and change management. Hence our literature review is comprehensive of these fields, setting it apart from the other reviews that exist, and giving essential depth to the programs that will result from this process.

Results: In order to effectively develop global health change agents, a new type of training is needed that takes a competency-based approach. A competency-based approach aims to equip individuals with specific competencies (skills, knowledge and attitudes) necessary for their role. Competencies are the core, instinctive approaches that inform an individual's engagement with patients, health systems, and the world at large. A list of global health change agent competencies will be presented. These outcomes will inform development of transformative learning, immersion, and empowerment programs that instill necessary competencies in Mount Sinai trainees who are uniquely positioned to develop into global health change agents.

Conclusion: In these times when health professionals are required to take on more roles in increasingly complex systems, they need to be trained in new ways and equipped with new tools. They must be prepared to transcend traditional modes of thought and practice, enabling them to identify cutting-edge solutions that meet the demands of the future. Drawing on global insights and a multi-sectoral approach, the Arnhold Institute for Global Health is well-positioned to complement Medical Education and offer programming that enables ISMMS medical students to rise to the challenges of the 21st century by applying a new set of global health change agent competencies.

ASSESSMENT

POSTERS 37 – 40

ABSTRACT #37

Perspective on the Role of a Spiritual Curriculum in a PAACS General Surgery Residency Program

Authors: Stephen Trinidad, Randall Owen

Purpose: A primary motivation for pursuing medicine is a desire to serve. Current research shows that this idealism can be eroded throughout training, leading to burnout and depression. While significant research has demonstrated the importance of addressing patients' spiritual needs, very little research has focused on the role of the physician's spiritual beliefs on their professional career. The goal of this study was to observe the impact of a spiritual curriculum on residents at the Pan African Academy of Christian Surgeons (PAACS) Residency Program at Harpur Memorial Hospital in Egypt.

Methods: A series of interviews with and observations of the residents and attendings at the Pan African Academy of Christian Surgeons (PAACS) Residency Program at Harpur Memorial Hospital in Egypt.

Results: The curriculum can be broken down into three levels of interaction: first, between residents and teaching faculty through weekly studies, small groups and yearly retreats; second, between residents and other hospital staff through structured weekly discussions; and third, between residents and patients.

Conclusion: The curriculum seemed to impact three areas: the resident's sense of professional identity, resident well-being, and ultimate career goals exemplified by alumni. Professional Identity: Residents were encouraged to view each patient encounter as an opportunity to serve and viewed their profession as a calling. They were willing to address all aspects of patient care including their patients' spiritual and emotional needs. Resident Well-being: The program director took explicit interest in the residents' entire well-being, including their marriage and family life. Residents were encouraged to participate in the local church and community with protected time available. Impact on PAACS Alumni: All 40+ PAACS graduates currently practice in underserved areas. Many specifically cite their calling as Christian physicians as their motivation for service. Future studies examining the spiritual curriculum's impact across all PAACS programs and more thoroughly examining the careers of PAACS graduates would be helpful.

ABSTRACT #38

Cardiac Arrest Team Training Needs Assessment: Resident Physician/Nurse Survey Regarding Cardiac Arrest Teamwork and Performance in the Elmhurst Emergency Department

Authors: Catalina Angel, Suzanne Bentley

Purpose: ACLS is the current standard for cardiac arrest team training. However, ACLS does not include formal teamwork/leadership training, or validated interdisciplinary educational approaches incorporating simulation. The Emergency Medicine (EM) cardiac arrest team includes multiple provider types, yet they rarely train together. This research project analyzed survey responses from EM resident physicians and nurses, assessing baseline perceptions of team communication/performance and preparedness to work on/lead a cardiac arrest team. This is the first step of a larger study, which explores whether administering an in situ simulation-based cardiac arrest team training intervention improves team performance metrics and perceptions of preparedness/performance. The survey identifies current needs in cardiac arrest team training, which will directly inform the training intervention.

Methods: Frequencies of 110 survey responses from Elmhurst EM RNs (n=23) and residents (n=87) were analyzed.

Results: The majority of residents/RNs rated the following as average or above average: overall ED cardiac arrest team performance, approved guidelines being followed, personal confidence performing role on the cardiac arrest team, personal communication during cardiac arrests, and knowledge of personal role during a cardiac arrest. The majority of residents/RNs rated the following below average: receiving performance feedback and/or formal debriefing after participating in a cardiac arrest, and receiving leadership feedback after leading a cardiac arrest. Responses to the following varied widely: presence of a clear/strong team leader, and team roles being clearly defined/followed. RNs rated the following significantly more negatively than residents ($p<0.05$): Overall cardiac arrest team performance, personal communication during cardiac arrests, receiving performance feedback, attending formal debriefing after cardiac arrests, team roles being clearly defined/followed, presence of a clear/strong team leader, situation monitoring, mutual support, team communication, and leadership.

Conclusion: Residents/ RNs had average or above-average perceptions of personal responsibilities related to a cardiac arrest. Responses regarding receiving feedback/debriefing were below average among both residents and RNs. RNs rated performance significantly worse than residents on multiple items. Items with below-average or widely varied responses, as well as resident-RN collaboration, represent areas for improvement, which the educational intervention will be designed to focus on.

ABSTRACT #39

Using Entrustable Professional Activities to Assess Graduation Readiness in Pediatric Cardiology

Authors: Shubhika Srivastava, Jeanne Marie Baffa, Frank Lowell, Alan Schwartz, Carol Carracio, Bruce Herman, Richard Mink

Purpose: Entrustable Professional Activities (EPAs) describe essential tasks that a subspecialist is expected to perform and were introduced to enrich assessment of trainees. The Subspecialty Pediatrics Investigator Network (SPIN) validated supervision scales for 6 of 7 EPAs common to all pediatric subspecialties; there are an additional 6 EPAs specific to pediatric cardiology (PC). The minimum level of supervision needed for graduating fellows in each EPA has not been determined. We hypothesized that EPAs will help establish consistent expectations for graduation from PC fellowship.

Methods: SPIN developed level of supervision scales for all PC EPAs. All program directors (PDs) of ACGME-accredited PC fellowships were sent a survey asking about the minimum level of supervision required for graduation for each EPA and whether a fellow would be allowed to graduate if the level was not achieved. Statistical analysis used non-parametric methods.

Results: Survey response rate was 80% (47/59). Respondents had a median duration of 4 years as PD. 90% felt that a fellow needed to achieve at least level 3 (trusted to perform the tasks with indirect supervision for most simple & some complex cases) for the EPAs describing 1) Imaging, 2) Management of Congenital and Acquired Cardiac Problems and 3) Arrhythmia Management. For the EPAs describing 4) Catheter Intervention, 5) End Stage Congestive Heart Failure and Pulmonary Hypertension and 6) Management of Cardiac Problems Requiring Intensive Care, 90% felt that fellows had to achieve at least level 2 (trusted to perform the task with direct supervision & coaching) to graduate. Scoring was not associated with years as PD ($p>0.05$) or EPA familiarity ($p>0.05$). Across EPAs, there were differences in whether a PD would graduate a fellow who did not meet the expected level, ranging from 87% for EPA 1 to 72% for EPA 4 ($p< 0.05$).

Conclusion: PC PDs expect a higher level for imaging skills and non-ICU care than for the other PC EPAs and do not expect fellows to be prepared to practice independently at graduation. It is important to have an infrastructure to support new graduates as they enter practice. Further study is needed to determine the reason for the difference in expectations.

ABSTRACT #40

The Point of Learning: The Use of Medical Student Learning Points in Shift Evaluations as a Means of Shared Learning

Authors: Anthony DeVivo, Ye Jung Ferrabolli, Jenny Beck-Esmay, Jamie Edelstein

Purpose: Emergency Medicine medical student evaluations have undergone a variety of innovations over the past several years. From verbal feedback to hand written evaluations to now electronically submitted shift assessments, the field of emergency medicine is always looking for more accurate means of student evaluation. Yet, despite the dedication to improving medical student assessments, this stressful aspect of the student's shift seems to have more educational potential than is currently being explored. The purpose of this innovation is to add an educational benefit to the electronic student evaluation by introducing shift learning points which are shared and viewed by all students on an electronic educational platform.

Methods: In an effort to add an educational component to the medical student evaluation, the Mount Sinai St. Luke's Roosevelt Emergency Medicine medical education team has introduced a subsection of its electronic evaluation allowing students to provide learning points for each shift that they work. These learning points are submitted along with the student evaluation once completed by the attending physician and transmitted to "StatChat", a section of the medical student website where students may review their own, as well as their peers' shift learning points. This allows students to disseminate their learning points among their peers, learn from their peers, and confirm that their student evaluation was successfully submitted

Results: The inclusion of learning points to the student evaluation, in conjunction with a means of shared viewing of these points by all students in the Emergency Department, allows students to share the knowledge they have obtained on shift with their peers, as well as read about what other students are learning on shift. This addition is meant to encourage self-directed learning at home, with the learning points as a guide to their reading and research. In addition, if a student is unable to see their learning points, they may contact the directors of medical education to remind that attending to submit their evaluation. This will decrease the time it takes to notify attendings of outstanding evaluations in an effort to produce more accurate student evaluations.

Conclusion: The advent of "StatChat", as well as the introduction of medical student learning points into shift evaluations, has allowed our rotating medical students to share their experiences in the emergency department with each other and broaden their learning opportunities. Facilitating the sharing of knowledge and experiences between students, and using this as a means of self-directed learning, will not only afford additional learning opportunities for each student, but will also encourage our students to take on the role of the educator when researching and sharing their learning points.

CURRICULUM: GME II

POSTERS 41 – 45

ABSTRACT #41

Implementation of a Pediatric Wellness Curriculum and its Impact on Resident Burnout and their Perception of Work-Life Balance

Authors: Johanan Vargas, Erika Regalado, Jessica Berrios

Purpose: To determine the prevalence of burnout in pediatric residents working in a community hospital and evaluate the impact of a newly introduced curriculum on the degree of resident burnout and work-life balance.

Methods: A resident wellness curriculum was created based on the 6 AMA areas of well-being: Nutrition, Fitness, Emotional Health, Preventative Care, Financial Health and Mindset and Behavior Adaptability. Curriculum objectives include (1) targeting all six areas for resident well-being as outlined by the AMA, (2) support and promote resident wellness through presentations, activities and events, (3) frequently assess resident wellness and provide easy access to mental health support, (4) review and improve upon curriculum components based on resident feedback, and (5) establish a resident wellness policy. Monthly didactic sessions were held to address a wellness topic. A committee and social subcommittee were formed for overseeing activities and implemented changes to the curriculum on a monthly basis. Pre and post curriculum surveys were conducted every 6 months for all pediatric residents using Mini Z burnout questions, PHQ-2 questionnaire and free text for comments.

Results: The pediatric wellness curriculum had 43 participants out of which 25 residents completed the survey at 1 year and 24 at 1.5 years post implementation of the new curriculum. Survey answers ranged from strongly disagree to strongly agree. There were 95.2% of residents who agreed or strongly agreed they were satisfied with their job at 1 year and 100% at 1.5 years. The perception of stress due to residency requirements also decreased by 12.6% during that time. Overall, residents reported improvement in the degree of control over their workload and their ability to work more effectively as a team at 1.5 years after curriculum implementation. Over half of the residents surveyed felt the wellness curriculum contributed in some part to their work-life balance and one-third of them felt it contributed greatly to work-life balance and well-being. None of the residents felt that the new curriculum had no impact or had a negative contribution to their wellness.

Conclusion: Since the implementation of a formal pediatric resident wellness curriculum there has been improvement in resident burnout and perception of work-life balance. Future research will focus on the effectiveness of the curriculum by observing changes in stress, depression, burnout and work-life balance.

ABSTRACT #42

Education for the Millennial Surgeon: Transforming ABSITE Learning with a Flipped Classroom Model

Authors: Natasha L. Leigh, Michael Passeri, Grace Kim

Purpose: Classroom didactic lectures with homework quizzes have thus far formed the basis of residency education. A flipped classroom model, which reverses this traditional teaching format, has been successful in better educating millennials. Its utility as an alternative teaching method for surgical residents has not been explored.

Methods: We retrospectively reviewed all general surgery residents who took the ABSITE at our institution from 2015 to 2017. General Surgery Club (GSC), a weekly flipped classroom-based resident-run conference, was introduced after the 2015 ABSITE. Pre-session learning resources and post-session summary guides were also provided. We compared ABSITE performances of GSC members to non-members; designated according to voluntary attendance.

Results: Over a 3-year period, 28 residents took the ABSITE; 12 members and 16 non-members. The two cohorts were of similar age ($p=0.46$), gender ($p=0.45$) and PGY distribution ($p=0.28$). Baseline pre-residency scores (USMLE step 1: 240 vs. 231 $p=0.65$, USMLE step 2 CK: 244 vs. 244 $p=0.22$) and surgical knowledge (median 2015 ABSITE score 55 vs. 61, $p=0.43$) were comparable. Members achieved higher ABSITE scores than non-members in both subsequent years after the introduction of GSC (2016: 64 vs. 54 $p=0.23$, 2017: 66 vs. 38 $p<0.01$). Members also demonstrated continued improvement over time; with 83% (vs. 37% non-members) achieving one or more scores higher than in their first ABSITE year. On regression analysis, GSC membership was predictive of a higher 2017 ABSITE score and score improvements over time ($p<0.05$).

Conclusion: The addition of a flipped classroom conference was associated with a significant and consistent improvement in ABSITE scores in our general surgery residency program. This teaching method may provide a better platform with which to educate the millennial generation.

ABSTRACT #43

Experiences from Mount Sinai Human Rights Program: Differences in Knowledge and Attitude among Medical Students at Icahn School of Medicine at Mount Sinai Associated with Human Rights and Asylum Seekers

Authors: Syed F. Haider, Kim Baranowski, Varsha Subramaniam, Elizabeth Singer

Purpose: Despite the World Medical Association's call for a greater focus on human rights education in medical schools1, there is still a lack of human rights education in U.S schools. In December 2015, the Mount Sinai Human Rights Program (MSHRP), a program which provides pro-bono medical assessment and medical care for U.S. asylum seekers who have faced human rights abuses in their countries of origin, developed a novel model for medical education. Through the implementation of a faculty-student hybrid led program, medical students at the Icahn School of Medicine at Mount Sinai (ISMMS) have the opportunity to work alongside faculty evaluators to provide medical and psychological evaluations, and serve on leadership teams to promote advocacy, human rights research and education, and the functionality of the program. Non-MSHRP medical students at ISMMS are engaged in the general curriculum. This study assesses the knowledge and attitudes of MSHRP and non-MSHRP students on human rights issues and asylum seekers.

Methods: Students at ISMMS were invited to complete a 25-item questionnaire. Using Graphpad 6 Prism, data was analyzed using t-tests.

Results: The sample included 60 females (63.8%) and 34 males (37.2%) with a mean age of 24.20. Thirty-five percent were MSHRP members. Only 26% reported prior experience with a human rights organization. There was no significant difference between students' beliefs regarding the duty of healthcare professionals to assist asylum seekers/refugees ($p = .07$). MSHRP students were more likely to endorse a higher level of interest in human rights issues ($p < .0001$), and expressed a stronger desire to provide medical care regardless of a patient's immigration status ($p = .0007$). In addtion, MSHRP students demonstrated improved knowledge of the significance of the medical affidavit in the legal process ($p < .0001$), reported an increased ability to discuss human rights issues with professional colleagues ($p < .0001$), and endorsed higher levels of disagreement with the statement: asylum seekers/refugees are a threat to the U.S. ($p < .0001$) than their non-MSHRP colleagues. Non-MSHRP students were less likely to report familiarity with the immigration process for asylum seekers ($p < .0001$), the socio-medical challenges faced by asylum seekers ($p < .0001$), and knowledge of the types of human rights violations experienced by asylum seekers ($p < .0001$). Furthermore, non-MSHRP students were less likely to report that they have the clinical and communication skills necessary to work with survivors of human rights abuses ($p < .0001$).

Conclusion: A human rights education may play a novel and pivotal role in training future physicians about human rights abuses and in preparing them to provide appropriate care to vulnerable populations. The MSHRP supplements general medical school curriculum at ISMMS.

ABSTRACT #44

The Residents' Perspective: A Longitudinal Assessment of the Mount Sinai St. Luke's and Mount Sinai West Emergency Medicine Retreat Program

Authors: Quinn Leslie, Daniel Egan

Purpose: For hundreds of years, retreats have offered protected time and space for individuals to step away from daily responsibilities, recommit to their core values, and return to familiar tasks with new insight and inspiration. The Mount Sinai St. Luke's and Mount Sinai West Emergency Medicine (MSSLW EM) Residency Program is similarly committed to providing its residents with essential tools to maximize professional development and wellness throughout their graduate training. The purpose of this study was to determine if residents believe that the MSSLW EM Retreat Program serves as an effective intervention that promotes success in residency, enthusiasm for training, and a sense of community amongst colleagues.

Methods: The study was executed via blinded survey of MSSLW EM residents over a 5 year period as a component of the Annual Program Evaluation. Residents were asked to evaluate the Retreat Program by answering six questions on a rating scale of 1 (strongly disagree) to 4 (strongly agree) based on their opinion of the program's efficacy. The program director distributed the survey and data was subsequently collected in a password-protected form with no personal identifiers.

Results: Overall, 93.75% of residents strongly agreed that the retreat curriculum benefitted their training while 93.50% strongly agreed that their retreat experiences both increased their enthusiasm for training and served as a useful intervention for goal setting. 94.25% of trainees surveyed strongly agreed that the retreat program aided them in their current resident roles and helped them prepare for their future responsibilities and careers. 94.75% felt that the retreat experience improved the unity, support, and mutual respect amongst their residency class. Finally, 91.75% of MSSLW EM resident physicians concurred strongly that the Retreat Program enhanced their awareness of the need for compassion and humanistic values in medicine.

Conclusion: Across all categories examined, MSSLW EM residents strongly agreed that the Retreat Program is a highly effective and valued component of the residency curriculum. The opportunity to participate in a comprehensive program dedicated to professional development, wellness, and community clearly enhances postgraduate medical education and strengthens residency training.

ABSTRACT #45

Pediatric Residency Program Directors' Current Practices and Attitudes toward Parenting-Focused Curricula

Authors: Blair S. Hammond, Lianna Lipton, Aliza Pressman, Mariel Benjamin, Gary Beck Dallaghan, Joel Forman, Carrie Quinn

Purpose: Pediatricians are well-positioned to support and promote strong parent-child relationships. However, most physicians are not taught about evidence-based parenting skills. Moreover, few studies have evaluated existing parenting curricula for pediatric residents to assess current practices and quantify this unmet educational need. The Mount Sinai Parenting Center aims to transform pediatric healthcare by giving pediatric residents the knowledge and skills to promote strong parent-child relationships and build behavioral and developmental skills in a preventive model. To that end, we are creating curricula that would target resident education as a cornerstone of the program. We sought to assess pediatric residency directors' opinions on the need to have residents trained on parenting topics and programs' ability and willingness to incorporate curricula into residency training.

Methods: An interdisciplinary group including a residency program director, a general pediatrician, a developmental psychologist, and a biostatistician developed a survey to assess the attitudes of pediatric residency leadership about parenting skills curricula for pediatric residents. Members of the Association for Pediatric Program Directors (APPD) were sent a 21-item survey via email.

Results: 173 members of the APPD completed a 21-item survey. Respondents were from 37 states. 100% of respondents reported it was "somewhat important" to "very important" to train residents about parenting skills (i.e. how to stimulate language/cognitive development, healthy sleep, positive discipline), with 58% of respondents reporting it was very important. Only 10% of respondents answered "very well" when asked how well their program currently educated pediatric residents on parenting behaviors that promote children's early cognitive and socioemotional development. Among those who reported that their programs did not do this very well, 86% reported one barrier was not having a curriculum. Preference for topics covered included positive discipline (95%), promoting self-regulation in children (82%), sleep training (82%), tantrums (79%), promoting language development (71%), toilet training (70%), promoting secure attachment (66%), promoting school readiness skills (64%), and promoting literacy (53%).

Conclusion: All respondents reported that training residents on parenting skills is important. However, fewer than 10% reported that they thought their program educated residents very well in these areas, with time and lack of existing curricula as key barriers. There was no significant difference in response based on whether the respondent was a preceptor in a residency clinic, nor based on the type of residency program. This highlights that there is an opportunity for a curriculum that addresses core competencies, increases residents' knowledge and skills, and is feasible to implement given time constraints and competing demands. Responses from this survey have helped guide the development and assessment of our parenting curricula.

PROFESSIONAL DEVELOPMENT II

POSTERS 46 – 49

ABSTRACT #46

Fostering Cross-disciplinary Research: Lessons Learned from STTEP-UP

Authors: Hannibal Person, Dagmar Hernandez, Adjoa Smalls-Mantey, Oluwasheyi Ayeni, Janice Gabrilove, Emma Benn, Emilia Bagiella

Purpose: There is an increasing need to foster cross-disciplinary research to address complex problems within healthcare. The Sinai Team-based Translational Education Program: the URM Propeller (STTEP-UP) is a NCATS funded program through the Icahn School of Medicine at Mount Sinai. Its goal is to facilitate URM post-doctoral trainees becoming innovative leaders in clinical and translational research. The program includes a team-based research component, where fellows collaborate on a project.

Methods: This year, disciplines represented by the four fellows include Cardiology, Psychiatry, Neurology, and Pediatrics. Identifying a clinical question and designing an investigation was facilitated by group brainstorming meetings with program mentors. Fellows designed a project to identify medical testing and prescribing that were not clinically indicated throughout the healthcare system, with the goal of exploring whether an intervention, including provider education, could reduce ordering practices. In addition to regular in-person meetings, a licensed virtual learning environment and free web-based sharing platform were used to foster collaboration.

Results: Challenges faced throughout this process, included fellows struggling to find protected time, difficulties accessing broad sets of data across the healthcare system, and overcoming administrative barriers between departments. Strengths of this approach included fellows learning new research strategies and feeling a deeper sense of commonality with their peers.

Conclusion: Overall, this experience supports the idea that cross-disciplinary research improves the collaboration and education of emerging researchers. However, addressing logistical and systems-based barriers may better facilitate this education and research.

ABSTRACT #47

Stated Plans at the Time of the Plastic Surgery Interview

Authors: Felipe Molina Burbano, Hope Weissler, Justin Taub, Peter J. Taub

Purpose: Currently, the majority of board-certified plastic surgeons work in a private practice setting. However, anecdotal experience by interviewers suggests most candidates interviewing for residency positions in plastic surgery express a desire to eventually practice in an academic setting. The authors sought to quantify the percentage of applicants who voiced such desire during interviews, as well as factors that may predict a stated preference towards an academic career.

Methods: The authors collected prospective data on candidates applying to a single plastic surgery residency. Each candidate was specifically questioned about their plans following the conclusion of their residency. The questions were open ended and the terms “academic” and “faculty” were not included in questions as prompts. Additionally, the age, gender, USMLE score, and number of publications was obtained for each applicant. Data from 69 students was collected over a 3-year period. A binary logistic regression model was created to explore if any of the mentioned variables was associated with stating intentions to fallow an academic career path.

Results: Regarding their future practice, eighty-seven percent (60 out of 69) of interviewees expressed a desire to work an academic practice. Seven gave no indication of a preferred future setting, and only two stated a desire for private practice. A binary logistic regression model showed that only age had a statistically significant relationship ($p=0.002$) with an expressed desire to practice in an academic setting, such that older applicants were less likely to voice such desire during their interview (Odds ratio of 0.43).

Conclusion: Our study corroborates anecdotal experience concluding that the great majority of plastic surgery applicants state an aspiration to eventually practice in an academic setting. The discrepancy between the number of applicants who say they would pursue an academic career and the relatively small percentage of board-certified plastic surgeons who practice in an academic setting can be explained in one of two ways. One possibility is that candidates know that key interviews for resident positions are done primarily by academic faculty and may believe that it is best to profess a desire to become academic faculty themselves in order to be ranked highly for the match. However, it is also possible that many candidates simply change their minds at some point during their six years of residency training. It is interesting that our findings show that older candidates are less likely to state plans to pursue an academic career. It is possible that older candidates have dependents, or are planning on having them soon, which is a factor that has been shown to steer candidates towards a private practice career.

ABSTRACT #48

Implementation of a Resident Well-Being Subcommittee across a Large Academic Hospital System

Authors: Alex Macy, Jonathan A. Ripp

Purpose: The ACGME Common Program Requirements Section VI and CLER Pathways 1.1 have made it increasingly important for Sponsoring Institutions (SIs) to engage GME stakeholders in addressing trainee well-being across specialties. Charged with this newly evolving responsibility, SIs are challenged to find new approaches for collective engagement in a variety of learning environments.

Our purpose was to leverage the oversight responsibility of our GMEC through the establishment of a Resident Well-Being Subcommittee (GME RWSC). This committee was charged with catalyzing trainee, faculty, and institutional stakeholders to address the well-being needs of trainees.

Methods: In 2016 GME leadership, clinical educators and institutional stakeholders chartered the GME RWSC. The purpose of the GME RWSC is to aid in the promotion of trainee well-being and take efforts to prevent or mitigate trainee burnout and identify residents at risk for depression and suicide.

Results: GME RWSC formed under the leadership of 2 faculty co-chairs, and membership comprised of trainees, faculty, program directors, and administrators from 12 clinical departments and 5 hospital sites. RWSC members represented employee health, trainee mental health, and the physicians wellness committee. Work groups were established with co-chairs, clear directives, and a set of deliverables around 5 domains:
Measurement: Surveys distributed to house staff across the health system (643 responses) assessed trainee burnout and perceptions regarding physical and mental health resources, and proposed wellness interventions.
Mandate: Developed “Expectations for the Promotion of Trainee Well-Being” outlining institutional expectations around Education to Service Balance; Work Hours, Leave, and Coverage; Trainee Health Needs; Faculty Mentorship; Development of Wellness Curricula; and Enforcement, Evaluation and Monitoring.
Mental Health Resources: Worked to develop a proposal for a dramatic escalation in the availability of mental health resources
Changing the Work Environment: Conducted faculty and trainee focus groups for at 3 hospital sites to assess system-level drivers of stress and burnout. Aggregated focus group feedback was used to development the aforementioned “Expectations” document.
Wellness Champions: Developed job descriptions and funding model for Faculty Wellness Champions to serve as program-level ambassadors promoting trainee well-being, including the development and assessment of wellness interventions and the review and evaluation of program-specific work intensity variables. This year-long pilot program launched in 2017-18 with 11 funded champions selected through competitive application.

Conclusion: A GME RWSC is a practicable and replicable framework for collective institutional engagement to address trainee well-being and establish institutional expectations. These efforts can promote effective measurement and interventions that align with accreditation requirements and institutional wellness initiatives.

ABSTRACT #49

"Change from Within": A Student-Initiated Peer-to-Peer Self-Care Model for Medical Education

Authors: Sean N. Neifert, Eric Robinson, Jordyn H. Feingold, Lori Zbar, Karen Zier

Purpose: Physicians who have poor personal health profiles are less likely to conduct evidence-based screening or recommend healthy lifestyle counseling for patients. Notably, the well-being of medical students is known to decrease during the course of medical education. Can medical student wellness be improved with a student-driven goal-setting exercise?

Methods: This study was administered in the setting of a first year clinical skills course. The primary endpoint was whether achievement of a goal, set by students using a goal setting framework (SMART goals), contributed to self-reported feelings of health and wellness. Secondary endpoints included various self-reported factors pertaining to success or failure of the goal. Chi-square, Student's t-test, and multivariable logistic regression were used to evaluate factors associated with improved wellness.

Results: 137 students participated in the exercise as part of the curriculum of the clinical skills course, and 80 students (58.39%) returned feedback upon completion. Commonly reported goals pertained to exercise (n=30, 37.5%), work/life balance (n=16, 20.0%), sleep hygiene (n=12, 15.0%), mindfulness (n=8, 10.0%), and nutrition (n=5, 6.25%). 31.3% of students accomplished their goal and 57.5% reported they would apply the framework in the future. On multivariate analysis, application of the formal goal-setting framework (SMART) was significantly associated with goal success (OR: 2.71; 95% CI: 1.46 - 5.03, p=0.002). Achievement of goals was highly associated with improved feelings of health (3.56 vs. 2.74, p=0.007) and wellness (3.80 vs. 2.68, p=0.0001) as assessed by Likert Scale. Notably, there were no differences between the non-achievers and those who achieved their goal based on perceived amount of time spent (2.26 vs. 2.40, p=0.72) or perceived difficulty (2.39 vs. 1.92, p=0.12) in achieving the goal.

Conclusion: Achievement of personal lifestyle goals was significantly associated with feelings of improved health and wellness. Implementing a module on self-care during an introduction to health counseling is practical and may be associated with improved student wellness.