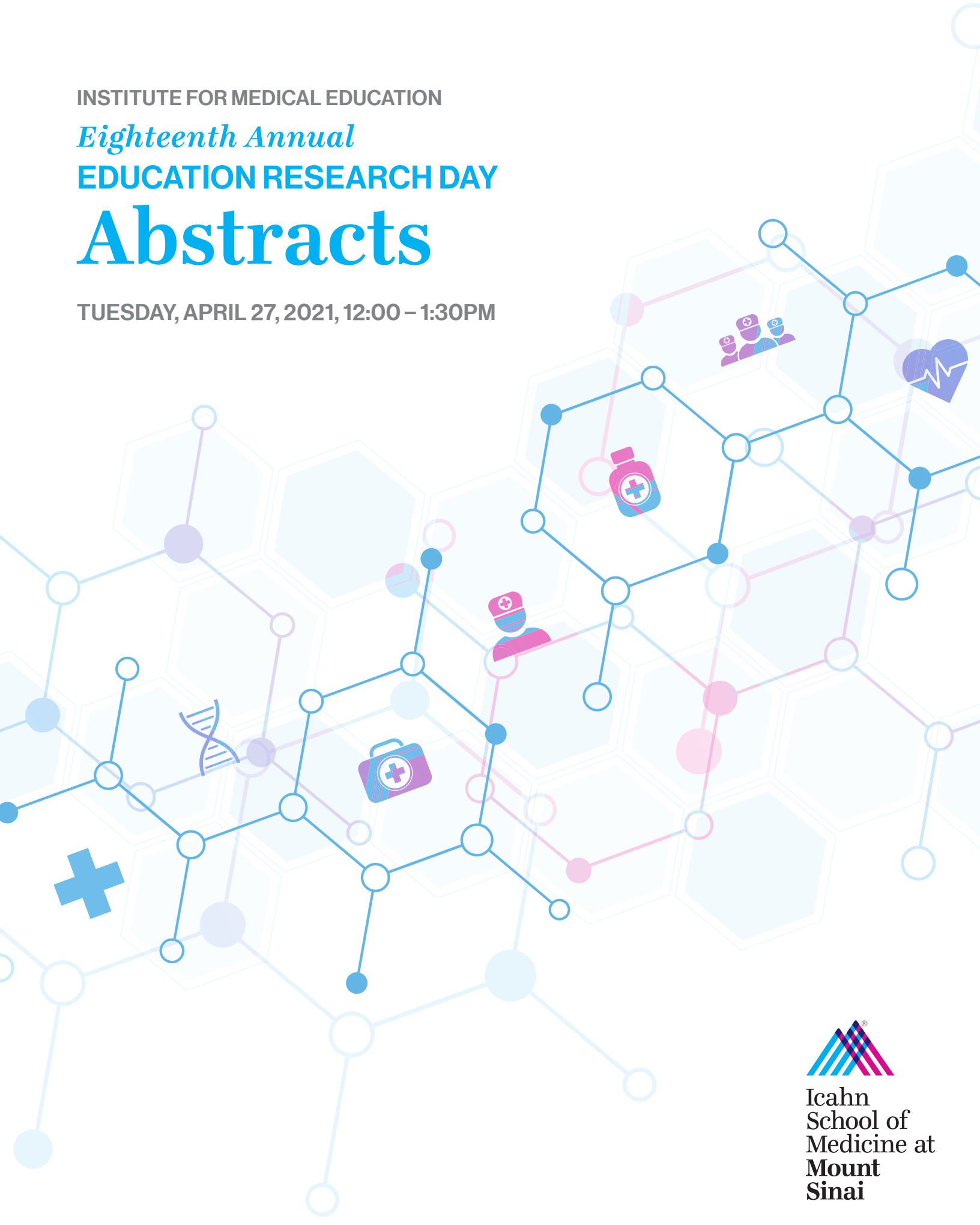
INSTITUTE FOR MEDICAL EDUCATION

Eighteenth Annual

EDUCATION RESEARCH DAY

Abstracts

TUESDAY, APRIL 27, 2021, 12:00 – 1:30PM



Icahn School of Medicine at Mount Sinai

TABLE OF CONTENTS

Education Research Day

SELECTION COMMITTEE 2021

Selection committee members did not participate in the discussion or voting for abstracts in which they were involved or with which they had any additional conflict of interest.

COMMITTEE MEMBERS:

Reena Karani, MD, MHPE, Committee Chair

Suzanne Bentley, MD

Andrew Coyle, MD

Linda DeCherrie, MD

Carrie Ernst, MD

Robert Fallar, PhD

Daniel Katz, MD

Maria Maldonado, MD

Leora Mogilner, MD

Lauren Peccoralo, MD, MPH

Kamron Pourmand, MD

Rainier Soriano, MD

EDUCATION RESEARCH DAY 2021

Welcome to the Institute for Medical Education (IME) at the Icahn School of Medicine's eighteenth 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 68 submitted to receive Blue Ribbons. Blue Ribbon Winners represent outstanding examples of educational scholarship.

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
Icahn School of Medicine at Mount Sinai

Robert Fallar, PhD
Assistant Director,
Institute for Medical Education
Icahn School of Medicine at Mount Sinai

THIS YEAR, 68 ABSTRACTS WERE SUBMITTED BY FACULTY, STUDENTS, TRAINEES AND STAFF ACROSS THE HEALTH SYSTEM.

All abstracts were reviewed by the 2021 ERD Selection Committee. Of the 68 submissions, five abstracts have been awarded Blue Ribbons as outstanding examples of educational scholarship.

Please join us in congratulating the 2021 Blue Ribbon recipients:

ABSTRACT #25
IMPROVING DOCUMENTATION OF PEDIATRIC OVERWEIGHT AND OBESITY BY RESIDENT PHYSICIANS
Vickie Wu, Carolyn Rosen, Leora Mogilner

ABSTRACT #29
ENGAGING PHYSICIAN TRAINEES THROUGH BEDSIDE ICU NARRATIVES
Christine Nguyen, Alexander Davidovich, Jonathan Stoever, Deep Patadia, Tal Shachi, Jessica Montanaro, Beverly Smith, Janet Shapiro, Mirna Mohanraj

ABSTRACT #34
MEDICAL STUDENT ATTITUDES TOWARDS THE USE OF PEER PHYSICAL EXAM LEARNING FOR THE FUNDOSCOPIC EXAM
Daniel Henick, Margarita Labkovich, Jake Radell, Nitin Chopra, Nisha Chadha

ABSTRACT #43
TRAINING AND TRANSFORMATION OF THE PEDIATRIC HEALTHCARE ENVIRONMENT TO PROMOTE POSITIVE PARENTING
Aurora Lewis, Mariel Benjamin, Carrie Quinn, Aliza Pressman, Blair Hammond

ABSTRACT #51
DO WE REALLY NEED THOSE LABS: A STUDENT-LED INVESTIGATION OF CROSS-DISCIPLINARY ATTITUDES ON DAILY LAB ORDERING IN ACADEMIC INPATIENT MEDICINE
Brandon Yeshoua, Jonathan Dullea, Joo Yeon Shin, Oluremi Konigbagbe, Victoria Staltare, Chip Bowman, Anne Linker, Surafel Tsega, Manan Shah

SECTION 1:

List of Abstracts

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

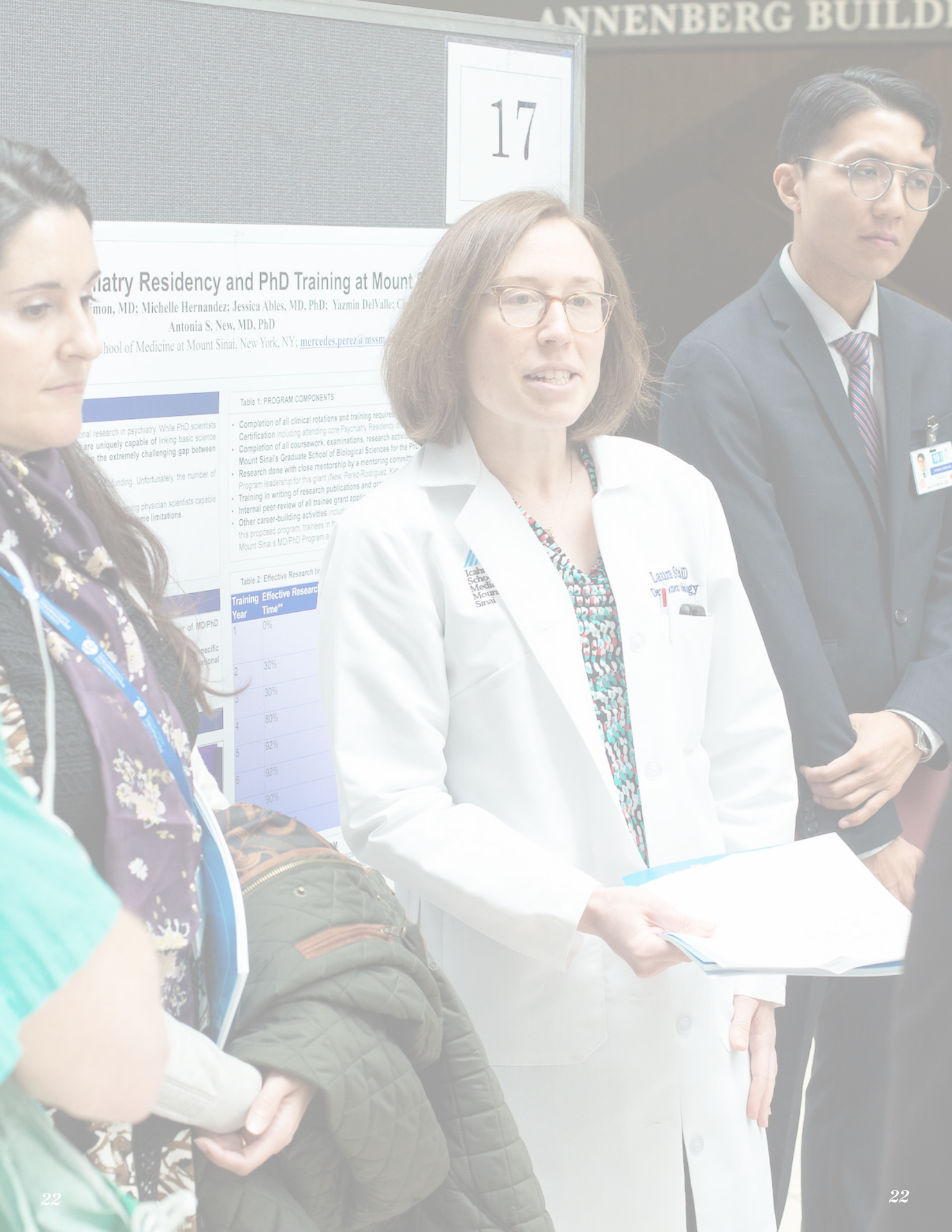
LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS


ANNENBERG BUILDI
17
iatry Residency and PhD Training at Mount
mon, MD; Michelle Hernandez; Jessica Ables, MD, PhD; Yazmin DelValle;
Antonia S. New, MD, PhD
hool of Medicine at Mount Sinai, New York, NY; mercedes.perez@mssm
Table 1: PROGRAM COMPONENTS
Table 2: Effective Research
Training Year
Effective Research Time**
1 0%
2 30%
3 30%
4 80%
5 92%
6 92%
90%

22

SECTION 2:

Assessment

POSTERS 1–2

ABSTRACT #1

LEARNING THEMES WITH THE GREATEST IMPACT ON LEARNERS: A QUALITATIVE ANALYSIS

AUTHORS: Elizabeth Yetter, Jacqueline Paulis, Laura Grunin, Kristin Carmody

PURPOSE: Assessment drives learning and is often investigated from the point of view of teachers and researchers.

However, no published research has investigated how and why assessments impact learning from the learner's perspective. This qualitative two-part study delved into how Emergency Ultrasound fellows learn from assessments using a constructivist design with an inductive thematic analysis.

METHODS: In the first part, a survey was sent to program directors of the 123 programs listed in the Society of Clinical Ultrasound Fellowships database to investigate what assessments were administered to fellows. The results were used to design a semi-structured interview for fellows in the second part. All interviews were transcribed and de- identified via a transcription service. The first three transcripts were coded independently, followed by a meeting whereupon researchers revised the interview guide to expand from formal assessments to learning activities due to the paucity of the former. The next three transcripts were coded, settling upon a code book under which the remaining transcripts were coded to determine if thematic saturation was reached. Initial transcripts were recoded based on the finalized codebook for a total of ten coded interviews reaching saturation. Transcripts were then coded via Dedoose and collapsed into themes that addressed how and why a particular learning activity impacted a fellow's learning.

RESULTS: Via the survey with a response rate of 31%, program directors reported a variety of measures including OSCEs and simulation, but most assessments were via informal interactions during weekly Quality Analysis (QA), scan shifts, and conferences. For the second part, fourteen codes were pulled from interviews. After analysis, four main themes emerged: (1) Role modeling/mentoring, (2) Deliberate Practice, (3) Experiential Learning, and (4) Professional Identity.

CONCLUSION: As there are no definitive measurements to evaluate Emergency Ultrasound fellows' progress, such as a board exam, program directors gauge progress using a variety of learning modalities, but most often use scan shifts and weekly QA and conferences. From the point of view of the fellows, most learning occurred via informal assessments and interactions rather than structured assessments initially sought in the study. These themes may be used by program directors to focus their assessments in order to make the greatest impact on fellows' learning.

ABSTRACT #2

ASSESSING RESIDENT PERCEIVED KNOWLEDGE AND INTEREST IN TOPICS IN HEALTH POLICY AND ADVOCACY

AUTHORS: Sukhbir Kaur, Mayce Mansour, Andrew Coyle, Jennifer Weintraub, Cary Blum

PURPOSE: An understanding of a physician's role in the health care system is a core milestone set forth by the ACGME for graduate medical education in Internal Medicine. This needs assessment seeks to assess resident knowledge and interest in topics relating to health policy and advocacy in order to guide curricular development and meet the milestones outlined by the ACGME.

METHODS: A needs assessment survey was send to all Internal Medicine residents (n = 152) in the Mount Sinai Hospital program. 72 total residents responded (response rate 72/152 = 47.4%). Residents were asked to rate their perceived knowledge on core topics in the field of health policy and rank their interest in a variety of supplemental topics. Responses were recorded on a 1-5 Likert scale with 1= not knowledgable and 5 = very knowledgable.

Residents were additionally polled on their preferred learning style. Residents who were interested in participating in supplementary activities such as a health policy journal club or practicum experience had the option to submit their contact information.

RESULTS: The response rate was similar across class years (38.9% PGY1, 33.3% PGY2, 27.8% PGY3). Residents largely preferred in-person didactics (44.4%) or a combination of live and prerecorded didactics plus discussion sections, i.e. a "flipped-classroom" approach (38.9%). Residents rated their knowledge as neutral with respect to the following topics: 1) "How the US healthcare system differs from other countries in terms of spending" (average rating 3.13/5), 2) "How the US healthcare system differs from other countries in terms of health outcomes (3.07/5).

Residents were less confident in their knowledge of the following topics: "Measuring productivity in healthcare" (1.77/5) and "The role of legislative committees and the state public health apparatus in developing state health policy" (1.94/5). Thirty residents were interested in participating in a health policy journal club and 20 residents were interested in a practicum advocacy experience.

CONCLUSION: Overall, there appears to be high interest and low perceived knowledge of topics in health policy and advocacy. Based on these results, we will pursue a combination of flipped classroom and in-person didactics. Topics residents ranked as "least knowledgable" may be best suited for a flipped classroom approach. This approach allows to for basic knowledge to be reviewed prior to a discussion section, where it can then be applied and any clarifications made. Topics residents ranked as "most knowledgable" may be best suited for a traditional guest lecturer format, as it would allow residents to ask questions in real-time to experts in the field.


WHAT YOU CAN DO
GET INFORMED.
STOP SMOKING.
SIGNS AND SYMPTOMS
TREATMENT
SIMULATION CENTER

SECTION 3:

Community Health

POSTERS 3-4

ABSTRACT #3

BARRIERS TO TELEMEDICINE USAGE IN A RESIDENCY CLINIC

AUTHORS: Pratyusha Nunna, Ines Robles Aponte, Dipal Patel

PURPOSE: Telemedicine is now at the forefront of medicine in the United States as a result of the COVID-19 pandemic. It has provided access to medical care at a safe distance during uncertain times and yet, the way telemedicine is utilized in an underserved population is not well-defined. With this study, we analyzed the trends in the adoption and use of telemedicine services and identified perceived and actual barriers.

METHODS: This project takes place at a Federally Qualified Health Center that serves as a training site for internal medicine residents. Demographically, 45% of the patients identify as African American, 31% Latino and 58% live below 100% of the federal poverty level. Our study population included all patients with a televisit encounter from the months of March to August 2020. Data was collected from two separate periods: March to May, the spring pandemic surge in NYC and June to August, the post surge. We surveyed residents on perceived barriers to telemedicine usage. We also hope to survey clinic preceptors and a randomly selected sample of patients. We anticipate this data will provide insight into identifying provider and patient level barriers and biases.

RESULTS: A total of 2898 televisit encounters took place from March to August 2020. The data shows that the >65 years old population had the lowest visit numbers during and post surge. There was an overall decrease in the number of telemedicine visits post surge by 36% with the steepest decline seen in the elderly population. Our resident survey revealed that 59% believed technology access and literacy to be the greatest barrier while 32.8% believed lack of physical exam to be a barrier. Only 6% felt the need for interpreter services would be an obstacle. Duration of the visit and time precepting were also noted to be obstacles.

CONCLUSION: There was an overall decrease in the number of telemedicine visits from during the surge to post surge. One great difference between these two time periods is that there were no residents in the clinic during the surge.

Resident perception of televisits and biases related to their population as well as clinic preceptor perceptions may have played a role in the decrease of numbers post surge. Other patient related factors such as the need to get outside as the city reopened and overall preference may be possible causes. We plan to further explore these possibilities. From this, we hope to provide solutions for perceived and actual barriers such that telemedicine remains center stage in health care.

ABSTRACT #4

IMPLEMENTATION OF A MEDICAL STUDENT-LED MODEL FOR TELEPHONE-BASED OPIOID OVERDOSE EDUCATION AND NALOXONE DISTRIBUTION TO AT-RISK PATIENTS DURING THE COVID-19 PANDEMIC

AUTHORS: Terence M. Hughes, Alexander Kalicki, Zina Huxley-Reicher, Wilma Torbino, Don Samuels, Jeffrey J. Weiss, Michael Herscher, Linda Wang

PURPOSE: The co-occurrence of the COVID-19 pandemic and ongoing opioid epidemic have increased the risk of overdose and death for patients with opioid use disorder (OUD). When clinics that see patients with OUD paused on- site visits due to the COVID-19 pandemic, access to opioid overdose education and naloxone distribution (OEND) was limited. We aim to describe a medical student-led effort to provide telephone-based OEND to at-risk patients during the COVID-19 pandemic at one hospital in New York City.

METHODS: Medical student volunteers were trained to provide patients with OEND via telephone. Eligible patients included all patients at a primary-care clinic specializing in treating people who use drugs, and patients presenting to the hospital with OUD or a history of opioid overdose. Students provided interested patients with opioid overdose education, and distributed a naloxone kit either by mail or at patient discharge from the hospital.

RESULTS: Over a 7.5 week period starting in May 2020, eight medical students logged greater than 200 hours of OEND calls, an average of 26.7 hours per student. Volunteers established contact with 165 out of 503 total patients (32.8%). Of the 165 patients reached, 90 (54.5%) accepted OOE while the remaining 75 (45.5%) declined. Of the 90 patients who accepted OOE, 84 (93.3%) agreed to receive a kit at the training's conclusion - either by mail or at hospital discharge.

CONCLUSION: The provision of OEND for at-risk patients is a critical component of any health system, clinic or harm reduction organization's emergency response plan. We have outlined a scalable, adaptable model by which other clinics can provide these services by telephone. Medical student-driven, telephone-based OEND efforts can effectively reach at-risk patients and maintain naloxone access remotely when access to on-site care is otherwise compromised.


Icahn School of Medicine at Mount Sinai
Objectives
Background
Methods

SECTION 4:

Curriculum (GME)

POSTERS 5-29

ABSTRACT #5

CREATING A HEALTH EQUITY RESOURCE COLLECTION FOR THE MOUNT SINAI HEALTH SYSTEM COMMUNITY

AUTHORS: Nicole B. Ramsey, Betty Kolod, Kenneth Ashley, Alexander Boulos, Angie Buttigieg, Emily H. Hertzberg, Maria Maldonado, Edward Poliandro, Edgar Vargas, Barbara Warren, Brijen Shah, Sananda Moctezuma, Genevieve Tuveson

PURPOSE: To disseminate a curated collection of health equity educational resources to the Mount Sinai community.

BACKGROUND: There is a growing interest in incorporating health equity and health care disparities education into graduate medical education. The ACGME asks programs and institutions to teach this topic connected to quality improvement. While resources such as MedEdPortal exist with equity and antiracism resources, there are no resources that bring together topics of systems based practice, equity, and healthcare disparities. We aim to create a curated collection of health equity educational resources for the Mount Sinai community

METHODS: The Mount Sinai Health Equity Resource Collection (HERC) is an output of the American College of Graduate Medical Education-sponsored Health Disparities Collaborative. The HERC was created to highlight high- quality literature, curricula, and resources on common themes in the health equity space, organized by theme and audience. The HERC is housed on the password-protected Sharepoint interface, and accessible to anyone with an MSHS login at http://bit.ly/msherc

RESULTS: The HERC launched in July 2020 and includes four media libraries for documents, links, podcasts, and videos. It also includes an embedded health equity-focused Twitter feed. Within the document library, there are eleven theme folders containing 171 documents; other libraries contain 18 videos, 14 podcasts, and 10 links to other health equity resources and collections. Document topics include COVID-19 health inequities, racism, and discrimination by ethnicity, cultural humility and limited English proficiency, discrimination on the basis of disability, equitable patient- centered communication, LGBTQI health inequities, refugee health, religious discrimination, social and structural determinants of health, implicit bias, and quality improvement. Each resource is annotated with a brief description, type, and audience. Between September 2020 through January 2021, there were 436 HERC visits. In January 2021 there were 29 unique viewers accounting for 194 site visits, and 10 unique viewers accounting for 58 visits in the past week.

CONCLUSION: The HERC serves as a password protected hub to disseminate curated health equity education material throughout the Mount Sinai Health System. The HERC will be updated biannually and future plans include a strategic dissemination effort, key resource designation, and prioritization, and graphic design update, expansion to include drug user health and curricula topic folders, quality and patient safety data, and incorporation of a user-friendly feedback area. This collaborative effort between trainees and faculty provides a living launchpad for educational sessions and initiatives to promote health equity.

ABSTRACT #6

ANTI-RACIST READING AND DISCUSSION GROUPS FOR THE MOUNT SINAI HOSPITAL SYSTEM

AUTHORS: Paloma C. Orozco Scott, Jessica D. Lee, Michelle A. Tran, Jerrel L. Catlett

PURPOSE: In response to the summer protests for racial justice, the student leaders of Sinai racial affinity groups organized anti-racist reading groups to create community and education around the urgent issue of racism.

METHODS: The student racial affinity group leaders were surveyed three times for their top choices for books, articles, and podcasts discussing racism. From these results, the following selections were chosen: So You Want to Talk about Race by Ijeoma Oluo, The New Jim Crow by Michelle Alexander, Medical Apartheid by Harriet Washington, "The 1619 Project" by The New York Times, and "Code Switch" by NPR. An invitation to participate in these reading groups was sent to all medical and graduate students, post-doctoral fellows, faculty, and staff. Groups were made using the participants selected reading and time preference. Facilitators received a training guide and 30-minute Zoom training session. The majority of books came from 14 independent bookstores. Through funds donated by MedEd and various student organizations, $1,357 was spent on these materials. All groups met virtually three times between August through October 2020 to discuss their selections. A voluntary survey was sent to all participants in November 2020.

RESULTS: There were 164 participants who identified as Mount Sinai medical and graduate students, post-doctoral fellows, staff, faculty, and administration, 21 of which volunteered to be group facilitators. There were 16 discussion groups that met three times each. Out of the 42 participants who responded to the feedback survey, 75% agreed they learned something new about the role of racism in medicine and healthcare, 87.8% discussed their reading outside their group, 57.5% agreed the reading changed how they thought or acted in their professional life, and 88.1% would recommend their program institute a first-reading for incoming classes on the topic of racism in science and healthcare.

CONCLUSION: This initiative created alternative spaces within Medical Education for people of different disciplines to talk about race and racism. The majority of surveyed participants agreed their experiences in this program taught them something new about the role of racism in healthcare and changed the way they go about their personal and professional lives. As a result of positive feedback and interest in continuing these groups, we are confident that the institutionalization of groups such as these will foster continued education, making the Mount Sinai community a leader in individual and institutional reflections on the role that racism places in healthcare education and provision.

ABSTRACT #7

CADAVERIC DISSECTION FOR ANESTHESIA TRAINING AUGMENTS PRACTICAL AND CLINICAL SKILLS

AUTHORS: Patrick Maffucci, Chang Park, Jeffrey Laitman, Daniel Katz, Garrett Burnett

PURPOSE: Anatomy is ingrained in the practice of anesthesia. From basic to complex procedures, success relies on a proficient understanding of anatomical structures. Cadavers have been shown to be effective research and teaching tools within anesthesia, especially during procedural learning and for ultrasound-based anesthesia. Human cadavers offer distinct advantages for hands-on practical learning and have been shown to be superior to manikins for teaching of facemask ventilation, direct laryngoscopy, and fiberoptic-guided tracheal intubation. Although benefits of cadaver use have been demonstrated in the literature, cadaver-based courses are often limited in scope and by the availability of materials and training. No previous studies have created a comprehensive cadaver-based anesthesia course which utilizes novel embalming techniques that allow ultrasound scanning and offers full dissections relevant to the field of anesthesia. Our aim was to design and implement such a course available to trainees and faculty that utilizes human cadavers to teach anatomy for clinical anesthesia practice.

METHODS: In collaboration with the Center for Anatomy and Functional Morphology, we obtained six cadavers to be used during our course. Eight residents per day participated in group discussions focused on relevant anatomy and subsequent dissections of these key anatomic regions. Using "freedom embalmed" cadavers, residents were able to utilize ultrasound to visualize anatomy and perform regional blocks, and then dissect these structures to observe the effectiveness of these techniques. Residents were also able to perform neuraxial techniques, such as the placement of epidural catheters, and then dissect down to the spinal cord to observe proper placement of these catheters in the epidural space. Residents completed anonymous pre- and post-course multiple assessments on anatomic and anesthetic knowledge. They also completed anonymous surveys assessing comfort with cadaveric dissection, perceived usefulness of the course, subjective learning benefits, and related topics.

RESULTS: Of all participants, 96% strongly agreed that it was beneficial to use human cadavers to review anatomy for anesthesia. Residents reported a subjective improvement in their understanding of the anatomic basis for neuraxial techniques and peripheral nerve blocks and found that the use of ultrasound on cadavers was extremely helpful.

Narrative comments positively emphasized the course's organization and clinical relevance. Residents demonstrated an improvement in assessment scores after participation in the course (pre- and post-assessment means: 59, 83), and this remained true when stratifying the scores based on training level.

CONCLUSION: The Anatomy for Anesthesia course was well-received, with both subjective and objective indicators of practical and clinical utility for our residents. Our experience last year has provided invaluable feedback as we prepare for the second iteration of the course, to take place in March 2021.

ABSTRACT #8

PEDIATRIC EMERGENCY MEDICINE (PEM) CORE PROCEDURE COMFORT LEVEL AMONG CURRENT AND INCOMING FELLOWS

AUTHORS: Prakriti Gill, Michelle Marin, Lauren Zinns

PURPOSE: There are no current standardized procedural education programs that PEM fellows are expected to complete at the beginning of their fellowship. The Accreditation Council for Graduate Medical Education (ACGME) outlines core procedures for PEM fellows but some of the listed procedures are not encountered often and many PEM physicians express some discomfort performing them. This is a survey study with an aim to assess the comfort level of current and incoming PEM fellows with common pediatric emergency department (PED) procedures. We hope to understand which procedures have perceived discomfort to understand how best to create a procedural education curriculum that all fellows would complete at the start of fellowship.

METHODS: We compared the procedures outlined by the ACGME for both pediatrics residency and PEM fellowship and selected procedures with significant overlap between the two. We selected thirteen procedures and organized these into five categories: anesthesia, infectious analysis, orthopedics, trauma/medical resuscitation and wound care. The survey was developed on REDCap and the comfort level for each procedure was graded on a 5-point Likert scale. Respondents were required to identify their year of training: third-year pediatric resident matched into PEM or first, second or third-year PEM fellow. We created a demographic section inquiring about location of the training hospital, annual PED volumes or prior medical work experience. The survey was approved by the PEM Program Directors (PDs) Survey Committee and distributed to all PEM PDs to send out to their current and incoming PEM fellows. A second survey on SurveyMonkey was also sent to all the PEM PDs to indicate the total number of trainees to whom they sent the survey.

RESULTS: There were 227 survey responses with a response rate of 49.5%. Approximately 63% of respondents were third-year pediatrics residents or first-year PEM fellows. About 90.6% of respondents were trained at urban, university hospital programs. Level of perceived comfort appeared to increase with higher levels of training. The procedures with the most responses in the comfortable or very comfortable categories were lumbar puncture (93%), simple laceration repairs (97%) and abscess incision and drainage (91%). The procedures with the majority of responses in the very uncomfortable or uncomfortable categories were chest tube placement (66%) and central line placement (73%).

CONCLUSION: This study provides an overview of comfort levels for a wide range of PED procedures among all current and incoming PEM fellows. While there is some variability in the perceived comfort levels with certain procedures among PEM fellows, there are some procedures with which most trainees feel uncomfortable. These results demonstrate a need for increased procedural education, specifically, for incoming PEM fellows.

ABSTRACT #9

IDENTIFYING THE OPTIMAL IMPLEMENTATION STRATEGY OF A WELLNESS CURRICULUM TO ENHANCE ATTENDANCE WHILE TRANSITIONING THE FORMAT DUE TO COVID-19 PANDEMIC IN A PULMONARY AND CRITICAL CARE MEDICINE FELLOWSHIP.

AUTHORS: Rachel Potter, Sakshi Dua

PURPOSE: Burnout has been a growing area of concern impacting Pulmonary and Critical Care Medicine (PCCM) physicians both professionally and personally. Junior physicians, including medical fellows, have been identified as a population more at risk of developing burnout due to the stress and demands associated with training. Part of graduate medical education includes developing habits and skills a physician will use throughout their career.

Fellowship training presents an ideal opportunity to provide wellness education and facilitate development of adaptive behaviors to cope with stress and decrease burnout. This need has been further emphasized as our trainees worked through a global pandemic which added a new set of stressors.

METHODS: Pre-pandemic, a clinical social worker developed a wellness curriculum (WC) consisting of a variety of topics to address the components of burnout: emotional exhaustion, depersonalization, and reduced sense of personal achievement. Over a 4 year period, a WC of 1 hour facilitated discussions was established and trialed at different times, different days of the week, and frequencies (weekly vs biweekly vs monthly) within the PCCM fellowship program at a single institution. These meetings were held indoors in-person (IIP) pre-pandemic. As a result of COVID-19 pandemic, the WC was transitioned by switching the physical setting from IIP gatherings to either outdoor in person socially distant (OIP) gatherings (weather permitting) or virtual meetings online. Attendance was tracked for each wellness session. But overall attendance was significantly lower than pre-pandemic IIP sessions.

RESULTS: Over a 4 year period, pre-pandemic IIP attendance noticeably increased with modifications to time slots, day of the week, and frequency of wellness sessions. We found that: A) Wellness sessions held during lunch hour resulted in the higher attendance and engagement. B) The best day to hold these sessions was one that coincided with fellows' continuity clinic. C) The optimal frequency was monthly (rather than weekly or biweekly). In contrast, after COVID-19 pandemic-related adjustments, we found a significantly lower attendance to any sessions, whether OIP or virtual online. During the pandemic a slightly higher attendance at OIP sessions was noted compared with virtual online sessions.

CONCLUSION: Over a 4 year period, pre-pandemic, a WC was developed and adjusted based on the needs of PCCM fellows. We determined that the optimal time, day and frequency of a well-being curriculum was a lunch hour, after fellows' continuity clinic and monthly (rather than weekly or biweekly). However while transitioning the format due to COVID-19 pandemic we noted a sharp decline in overall attendance. Within the new adjustments, we did note a much better attendance at outdoor in-person socially distant meetings compared to virtual online format. Further work will be needed to determine the optimal strategy to enhance fellow attendance to wellness sessions in the "new normal".

ABSTRACT #10

DEVELOPMENT OF A NOVEL DIGITAL ONCOLOGY CURRICULUM FOR MEDICAL RESIDENTS AND ONCOLOGY FELLOWS

AUTHORS: Shana Berwick

PURPOSE: Oncology is arguably one of the most difficult subjects to learn as a medical resident and early fellow. Previous studies have demonstrated that inpatient oncology ward rotations leave residents ill-equipped to manage oncologic patients and even less inclined to pursue careers in oncology. The majority of patient cases that residents encounter revolve around end-stage oncologic complications thus residents lack sufficient exposure to initial work up and standard management practices. Existent oncology curriculums are predominantly lecture-based, often heavily reliant on clinical trial data, lacking a clear and cohesive diagnostic and therapeutic framework that can be easily applied to future cases. This digital curriculum aims to transform the current landscape of inpatient oncology education.

METHODS: This novel curriculum is geared toward engaging medical residents and fellows as adult learners by embracing principles of adult learning theory such as self-direction, spaced learning, and internal motivation. The core of the curriculum consists of a high-yield, flow chart-based point-of-care reference sheet for each primary solid oncologic and hematologic malignancy summarizing key points in diagnosis and clinical management. These reference hand-outs will be available both electronically and in print. The reference hand-outs will have associated brief e-modules that concisely expand upon the summarized reference material and associated cases with questions that can be worked through in entirety using only the reference handout. This trimodal learning portfolio will serve as an independent, flexible resource that accommodates residents' and fellows' irregular inpatient schedules and a clinically applicable resource such that it can be easily referenced not just for learning but also for active patient management on the inpatient wards.

RESULTS: This digital curriculum is currently in development, with implementation targeted for the summer 2021 new class of internal medicine residents and oncology fellows. The curriculum spans topics on both solid oncologic and malignant hematologic cancers with a reference handout, e-module and cases for each major cancer. The effectiveness of this new curriculum will be measured with quantitative usage data rather than pre/post learning surveys assessing knowledge acquisition.

CONCLUSION: There is an educational gap that needs to be filled between the hour-long lecture on a series of clinical trials that led to the standard of care approach to colon cancer and multiple densely detailed UpToDate chapters on colon cancer. Medical residents and fellows need a flexible, straight-forward, easy-to-access resource that succinctly summarizes oncologic diagnostic and management frameworks and serves as a tool for both active adult learning and active patient management. This practical resource will improve upon the existent format of lecture-based learning by providing a cohesive, adaptable, and clinically relevant curricular experience.

ABSTRACT #11

IDENTIFYING RESIDENT BARRIERS IN RECOGNIZING AND ADDRESSING SOCIAL DETERMINANTS OF HEALTH (SDH)

AUTHORS: Ines M. Robles Aponte, Shruti Anand, Pratyusha Nunna, Dipal Patel

PURPOSE: Social determinants of health (SDH) are important predictors of health outcomes. The World Health Organization defined SDH as "conditions in which people are born, grow, live, work and age." Since 2016, our internal medicine ambulatory curriculum has introduced residents to principles of equitable patient care including how SDH impact the health outcomes of our patients. This study examines the impact of the curriculum on resident knowledge and practice habits as they relate to SDH and health disparities. The objectives include; identifying resident knowledge gaps and barriers in recognizing and addressing SDH and to demonstrate change in resident knowledge and practice regarding appropriate management of patients with identified social barriers to care.

METHODS: During phase one of this project, we invited all internal medicine residents at a large urban program to complete an online survey in the Fall of 2020. Through this survey, we isolated potential knowledge gaps and barriers. Phase 2 of the project will focus on peer to peer resident education on screening for SDH, documenting findings as assessments (Z-codes) and writing social prescriptions. We also hope to create resource sheets for both resident providers and patients.

To assess the effect of these interventions, we will measure changes in the use of EMR-based SDH screening tools, Z-codes assessments, and utilization of patient education regarding specific interventions and referrals. We will also re-survey the residents to track changes in perception and practices for addressing SDH and health disparities.

RESULTS: Of 126 potential subjects, 65 (52%) completed the survey. While 98.5% of them noted the importance of SDH on health outcomes, only 7.7% knew how to use the screening tool in the clinic EMR, 3.1% knew to document SDH as an assessment and 31.1% noted knowledge gaps in recognizing SDH as a barrier. Other barriers included lack of appropriate time in clinic and uncertainty in available resources once SDH was identified. Most (84%) did consider it to be a physician's responsibility to address SDH.

CONCLUSION: Addressing SDH during a clinical encounter is a key component to improving health outcomes. Our survey identified numerous barriers to recognizing and addressing SDH in our residency clinic. We showed that despite a formal, established curriculum on SDH and health disparities, residents remain unprepared to apply that knowledge in a practical manner. Our educational interventions aim to decrease these knowledge-to-practice gaps. Through this repeated application, we hope that addressing SDH becomes as second nature as checking vital signs.

ABSTRACT #12

THE FLOOR PASSPORT: IMPROVING AND STANDARDIZING INPATIENT PEDIATRIC RESIDENT EDUCATION

AUTHORS: Izumi Watanabe, Priya Rolfes, Jennifer Gillen

PURPOSE: Pediatric residents spend the largest proportion of their training on inpatient floor units. However, due to variability in patient census and the seasonality of certain pathologies, residents' exposure to important inpatient general pediatrics topics can vary even within the same institution. Our institution already has an intervention in place in the PICU to help mitigate these differences and ensure that residents receive a more standardized exposure to important topics during their PICU rotation; similarly, we feel it is necessary to standardize resident education during inpatient floor rotations to cover topics essential for a general pediatrician.

METHODS: We selected 10 teaching topics for each inpatient subspecialty field based on the American Board of Pediatrics content outline for the General Pediatrics certification examination. We refined this list using input from faculty and fellows in each field. Each topic is designed to be covered in 15-20 minute teaching sessions to be given at any time while residents are working on the floor. Topics were designated as either core required, or elective for each subspecialty, and will be presented in an electronic "Floor Passport" format for residents to check off topics as they receive teaching sessions, with goal minimums per block and by the end of residency. Required procedures are also included. Faculty and fellows are provided learning objectives for each topic, and asked to cover requested topics as part of daily teaching. Passports will be checked before and after each block to determine which topics have been covered during that time, as well as at the end of each year. Surveys will be distributed to residents pre - and post - implementation of the Floor Passport to assess effectiveness of the Passport in prompting teaching sessions, and residents' attitudes about the sessions as well as their ability to request teaching. Feedback will also be solicited from faculty and fellows.

RESULTS: 68 pediatric residents will receive the Floor Passport. Though we do not yet have data, we hypothesize that the Floor Passport will improve the quality and variety of resident education on the inpatient floor by increasing the number of formal teaching sessions on essential topics, as well as increase resident comfort in requesting teaching sessions from faculty and fellows. We will also assess the length of inpatient rounds as a secondary outcome measure. Future directions may include investigating performance on In-Training Exam scores pertaining to inpatient topics.

CONCLUSION: The Floor Passport aims to improve resident education on the inpatient floor by targeting specific topics to be taught during these rotations to better standardize residents' exposure to high yield inpatient general pediatrics topics. It also seeks to empower residents to request teaching from faculty and fellows, and assists faculty and fellows in providing effective and efficient teaching appropriate to residents' needs.

ABSTRACT #13

DEVELOPMENT OF A WEBSITE TO FACILITATE GASTROENTEROLOGY/ HEPATOLOGY LEARNING USING INTERACTIVE, CASE-BASED SCENARIOS: GISIM

AUTHORS: Jaclyn H. Chesner, Morgan Goodman, Jonathan Nahas, Kamron Pourmand, Samira Farouk, Brijen Shah, Bhavana Rao

PURPOSE: Current online educational resources such as question banks and seminars focus heavily on knowledge recall, with limited opportunities for learning by application. Clinical cases as an instructional tool serve as key anchors for learners to apply medical knowledge. Gastroenterology(GI) and hepatology(hep) is a visual field with endoscopic, radiographic and pathologic data playing a critical role in patient care. Current learning tools provide limited opportunities for case-based learning that integrates these aspects. A free open access medical education (FOAMed) website dedicated to nephrology, NephSIM, created by our collaborator provides an innovative platform for case- based learning with infographics. We sought to create a mobile optimized, FOAMed website, dedicated to GI/hep, for GI/hep fellows and internal medicine(IM) residents, containing a collection of interactive case journeys designed to teach pathophysiology and disease management, and to support the development of clinical reasoning and data synthesis skills.

METHODS: The website was created on Wordpress and modeled after NephSIM. Hypothetical cases were drafted by Mount Sinai IM residents and GI/hep fellows and reviewed by clinical GI/hep faculty. Each case is presented as a sequence of history and examination details, laboratory and imaging findings, endoscopy and pathology results, leading to a final diagnosis. Questions encourage users to develop a differential diagnosis and select the next best steps in assessment and treatment, in keeping with the principles of appropriate clinical reasoning, cost conscious high-value care and guideline driven practice. Real-time feedback is provided on their choices. GiSIM was created and launched with 4 GI/hep peer reviewed cases to approximately 500 IM and GI/hep trainees across the Mount Sinai system in January 2021. A Google Forms-based survey was embedded into GiSIM to collect data on user demographics and solicit feedback using a Likert scale on website usability, content quality, difficulty level, and perceived educational value.

RESULTS: Thus far, respondents include 1 attending, 5 fellows, and 9 residents. Most users took <5 minutes (38%), or 5-10 minutes (56%) to complete cases, with faster completion times generally correlating with higher training levels. Case length was deemed “just right” by 88% of users. All users said that the website was easy to use. All users agreed or somewhat agreed that cases were interactive, enhanced their understanding of the topic, improved their confidence in the subject area, and reported that they would use the resource again and recommend it to their colleagues.

CONCLUSION: Preliminary results demonstrate a perceived enhancement in medical knowledge with GiSIM and a majority of the users are inclined to continue use and recommend it to others. Further studies are required to measure the impact of GiSIM on improving clinical reasoning, and to ascertain effective strategies for integrating its use with traditional didactic formats.

ABSTRACT #14

VIRTUAL GERITALK: CAN COMMUNICATION BETWEEN PHYSICIANS AND PATIENTS WITH SERIOUS ILLNESS BE IMPROVED THROUGH REMOTE LEARNING IN THE SETTING OF THE COVID-19 PANDEMIC?

AUTHORS: Frydman, Laura P. Gelfman, Elizabeth C. Lindenberger, Cardinale B. Smith, Stephen Berns, Amy S. Kelley, Lindsay A. Dow

PURPOSE: High quality serious illness communication is essential to older adults' medical decision-making, quality of life, and adjustment to serious illness. Designed specifically for geriatric and palliative medicine fellows, the Geritalk course is an educational communication skills intervention using didactics, skill practice, and reflection usually held in person over 2 days. Due to the COVID-19 pandemic, Geritalk was adapted to a virtual format as 1.5 hours/day for 5 days, complemented by asynchronous online learning modules. Our study evaluated the self-assessed preparedness of trainees for serious illness communication before and after the virtual course, and compared these findings to a historical control from the in-person course.

METHODS: In July 2020, Geriatric and Palliative Medicine fellows from Mount Sinai participated in the virtual Geritalk course. Fellows were asked to complete anonymous pre- and post-self-assessments of preparedness for serious illness communication with patients and families, using survey items with responses on a five-point Likert scale. De- identified and anonymous survey data was collected using REDCap.

RESULTS: Of the 20 Geritalk participants, 17 (85%) completed the pre-course assessment, and 14 (70%) completed the post-course assessment. After the course, 10 (71%) respondents had a "positive/very positive" attitude toward remote learning, as compared to 6 (35%) before the course. Overall, 13 (93%) rated the educational quality of the course as "excellent" and "strongly agreed" that they would recommend the training to others.

Compared to in-person Geritalk, virtual Geritalk led to comparable improvements in mean self-reported preparedness across all surveyed communication skills: giving bad news (virtual pre-course 3.1 improved to post-course 4.5, in- person pre-course 3.1 improved to post-course 4.5); conducting a family conference (virtual 2.9 to 4.1, in-person 3.1 to 4.4); discontinuing life-sustaining treatments (virtual 2.8 to 3.9, in-person 2.9 to 4.3); responding to patients who want treatments that you believe are not indicated (virtual 2.6 to 4.1, in-person 2.5 to 4.2); discussing religious/spiritual issues (virtual 2.8 to 4, in-person 2.8 to 3.8); eliciting concerns at the end of life (virtual 3.3 to 4.7, in-person 2.9 to 4.6); expressing empathy (virtual 4.2 to 4.9, in-person 3.4 to 4.7); discussing treatment options, including comfort-focused care (virtual 3.2 to 4.1, in-person 3 to 4.4); and discussing code status (virtual 3.8 to 4, in-person 3.3 to 4.3).

CONCLUSION: Virtual Geritalk trainees reported comparable increases in self-assessed preparedness for serious illness communication to in-person trainees, yet the course format required fewer resources (e.g., participant and facilitator time, space, travel, and catering costs). Furthermore, the course was highly rated by participants and, after the course, attitudes toward remote learning improved.

ABSTRACT #15

IMPROVEMENT OF RESIDENT LEARNING ENVIRONMENT THROUGH CONFIDENTIAL MEETINGS AND MODIFIED DELPHI METHOD

AUTHORS: Lauren Lisann-Goldman, Bryan P. Mahoney

PURPOSE: Self-determination theory, a school of thought within social psychology that describes foundations of human motivation, posits that a desire to learn arises from the fulfillment of three psychological requirements: a sense of relatedness, autonomy, and a sense of competence. This framework can be applied to curriculum development and the shaping of the culture of a department. We sought to develop a structured approach to address these "psychological needs" and also improve the learning environment of our anesthesiology residency program. "Confession groups" have been demonstrated as an opportunity for residents to present, discuss and reflect on professional and personal challenges without fear of repercussion. These sessions involve reading, out loud, anonymous "confessions" that have been previously submitted by group members. We applied the Delphi technique as an overarching structure to repeated "confession groups," that alternating with meetings with department leadership. The underlying goal was to determine whether the residency working/learning environment could be improved with this structured approach in a virtual forum.

METHODS: Confessions sessions were held every several months through Zoom. An email prior to each session was sent out to residents inviting responses to a brief survey and requesting attendance at the virtual meeting. The overarching meeting structure is a modification of the Delphi method, which is an iterative meeting structure most often used to generate expert consensus. The meetings represent an end in themselves, but were also structured to enable qualitative analysis of content that arose from the meetings. The initial open-ended prompt allowed us to first select concerns that could be addressed to answer the underlying question of whether the residency learning environment could be improved (i.e. purposive sampling). Several iterative meetings (including with program leadership) enabled a saturation of initial themes, followed by further clarification of those specific themes (i.e. theoretical sampling).

RESULTS: Concerns that arose in the meetings were discussed and addressed by program leadership. Perhaps the most valuable outcome of these sessions has been the generation of a class representative system, in which an individual from each resident class acts as a sounding board for residents regarding any issues that arise, and a liaison to the program leadership to voice these concerns.

CONCLUSION: This structure of confidential resident meetings alternating with meetings with leadership has allowed the successful implementation of residency program and departmental changes on an ongoing basis.

ABSTRACT #16

THE EFFECT OF USING THE MEDCHALLENGER QUESTION BANK AND OTHER STUDY TOOLS ON OB/GYN RESIDENT IN-SERVICE EXAM PERFORMANCE

AUTHORS: Liza Karotkin, Melissa Lozano, Barbara Deli

PURPOSE: The Council on Resident Education in Obstetrics and Gynecology (CREOG) Examination is administered annually to Obstetric and Gynecology Residents. This inservice examination is used to assess medical knowledge and provide information regarding the educational quality of a residency program. Studies have also shown that performance on the CREOG examination can predict successful performance on the American Board of Obstetrics and Gynecology (ABOG) written examination. Several educational studies have demonstrated improvement in resident CREOG scores with targeted educational interventions such as directed study programs and study guides but there is limited information regarding the value of question banks. A study conducted at the UT Southwestern General Surgery program showed a positive correlation between the number of questions answered in the True Learn question bank and resident performance on their respective yearly in-service exam. In the 2019-2020 academic year, the Obstetrics and Gynecology department at Mount Sinai West provided the MedChallenger question bank to its residents to aid in CREOG exam preparation. We hypothesized that the number of MedChallenger questions answered would correlate with CREOG exam performance.

METHODS: Resident CREOG score reports for the 2020 CREOG exam were reviewed. MedChallenger data was collected to determine the total number of questions answered for each resident. Additional data regarding resident study habits for the 2020 CREOG exam was collected in the form of a survey. A Spearman correlation was performed to determine the association between the number of MedChallenger questions answered and resident CREOG exam scores.

RESULTS: There was insufficient evidence to conclude that there is an association between the number of MedChallenger questions answered and PGY Percentile on the 2020 CREOG exam. (Spearman rho = -0.09, 95% CI: (-0.47, 0.33), p=0.68). Survey data collected from residents showed that many residents used alternative resources to prepare for the 2020 CREOG exam. Residents who used the TrueLearn question bank to prepare had significantly higher CREOG exam scores than those who did not (p=0.03).

CONCLUSION: Implementation of a question bank, MedChallenger, for inservice exam preparation showed no correlation between the number of questions answered and 2020 CREOG exam performance. Additionally, survey data of residents showed that those who used an alternative question bank, TrueLearn, had significantly higher CREOG scores. This study was not designed to investigate how extensively TrueLearn was used and what, if any, independent effect it had on exam scores. Further data will be collected in the 2020-2021 academic year to determine what effect TrueLearn question bank use has on resident exam performance.

ABSTRACT #17

SINAI INTERNAL MEDICINE ULTRASOUND GROUP (SIM-U): A PRACTICAL, SELF-DIRECTED PULMONARY ULTRASOUND CURRICULUM FOR INTERNAL MEDICINE RESIDENTS

AUTHORS: Aaron C. Shpiner, Victor Razuk

PURPOSE: Point of Care Ultrasound (POCUS) is an established tool for the rapid diagnosis and management of pulmonary pathology. Compared to traditional diagnostic tools such as stethoscope auscultation and chest radiography, bedside POCUS has demonstrated superior sensitivity for pulmonary pathologies[1]. Studies have shown improvement in clinical outcomes with incorporation of POCUS, including shorter hospitalizations for patients with CHF[2]. Formal training of medicine residents during residency have shown to improve trainee comfort and skills with POCUS [3,4]. Despite clear benefits to POCUS and POCUS-related training, barriers to implementation exist for residency programs, including access to machines, lack of faculty training for education and subsequent reinforcement, and a lack of protected educational time. To both meet this clinical need and expressed interest within the Mount Sinai Internal Medicine residency, we developed a formal training and certification pathway for residents to be educated in Pulmonary POCUS for utilization in care of patients on medicine floors.

METHODS: To further characterize our learners and learning environment, we began a needs assessment. A survey of the Internal Medicine residents at The Mount Sinai Hospital determined areas of current POCUS utilization, attitudes regarding use of POCUS, perceived deficiencies in training, and interest in future training programs. Educational curricula and faculty resources from other subspecialty training programs within Mount Sinai and other institutions were reviewed. Faculty stakeholders were identified within the Department of Hospital Medicine and Institute of Critical Care Medicine to take part in developing and implementing the curriculum. Handheld ultrasound technology with image sharing capabilities were identified to acquire and review learners' images.

RESULTS: Based on the needs assessment, a curriculum for Pulmonary POCUS was developed with the goal to increase learner competency and establish a pathway for independent utilization of these skills in patient care. This was done using a three phase design: virtual and in-person hands-on and expert lead didactic sessions, independent image acquisition, and review of obtained images and interpretations by certified faculty. Specific checkpoints for completion include attendance of didactic sessions, successfully obtaining five examples of each pulmonary ultrasound image component (Anatomic Structures, A-lines, B-lines, Lung Sliding, Pleural Effusion, Consolidation), and passing a bedside practical assessment. Utilizing portable ultrasound and imaging sharing technology, learners can independently acquire and interpret images, then obtain expert review to ensure both exam accuracy and provide feedback to improve practice.

CONCLUSION: This curriculum for Internal Medicine residents provides a sustainable educational pathway to increase utilization of Pulmonary POCUS while providing means to assess competency with expert practitioner review.

ABSTRACT #18

CARING FOR YOUNG ADULTS WITH DEVELOPMENTAL DISABILITIES: CAN WE IMPROVE KNOWLEDGE AND SKILLS AMONG PEDIATRIC AND INTERNAL MEDICINE RESIDENTS THROUGH A MULTIMODAL AMBULATORY CURRICULUM?

AUTHORS: Alexis Tchaconas, Joseph Truglio

PURPOSE: This study seeks to improve knowledge and skills in the care for individuals with developmental disabilities (IDDs) among internal medicine and pediatrics residents. The medical education community has recently acknowledged the major gaps in knowledge among physicians in the care of IDDs, calling for the creation of "disability competencies" in health care education. There is also recognition of the important role of transitions of care in pediatrics for IDDs, which is lacking in both undergraduate and graduate medical education, with nearly one-third of residency programs devoid of any education in this area. There are no formal curricula to address transitioning care of IDDs to adult providers and the complex medicolegal implications of these transitions such as guardianship. Due to the lack of curriculum to address these knowledge gaps in both trainee populations, we propose a multimodal curriculum on IDDs for the pediatric and internal medicine residency programs at The Icahn School of Medicine at Mount Sinai.

METHODS: We used a pre-workshop questionnaire to assess trainees' baseline knowledge of medical and social issues specific to IDDs. We then delivered a workshop with case-based discussion and resources for guardianship and transitions of care. Immediately after, 2 months after and 6 months after the workshop, we reassess the trainees using a similar questionnaire to determine whether they acquired, retained and applied new knowledge regarding the care of IDDs. A virtual standardized patient encounter is currently being developed and will be compared alone and in conjunction with the workshop.

RESULTS: Overall, 69 residents participated in the workshop (55 internal medicine, 9 pediatrics and 5 combined internal medicine-pediatrics). At baseline, participants had good knowledge of the clinical description of autism (92.7%) and cerebral palsy (84%), with only knowledge of cerebral palsy significantly improved immediately post-workshop (96%, χ^2=4.39, p=0.36). The largest baseline knowledge gaps were noted in transitions of care (4.3%) and guardianship (23.2%), both of which improved immediately after the workshop (transitions knowledge increased to 72.5% with χ^2=58.4, p<0.001; guardianship knowledge increased to 58.8%, χ^2=14.3, p<0.001). Follow-up data from 2 months after and 6 months after the workshop is pending.

CONCLUSION: Internal medicine and pediatrics residents significantly improved their knowledge base in cerebral palsy, transitions of care and guardianship after participating in an educational workshop addressing these topics. Further data collection is pending to determine the long-term durability of this knowledge.

ABSTRACT #19

JUST-IN-TIME PHYSICAL EXAM VIDEOS TO IMPROVE EXAM PERFORMANCE AND DOCUMENTATION IN THE EMERGENCY DEPARTMENT

AUTHORS: Bess Storch, Jared Kutzin, Melissa Leber, Amie Kim, Monica Sethi, Eric Legome

PURPOSE: A common practice in the emergency department (ED) is for providers to search the Internet for videos for a quick refresher on the proper performance of complex physical exams. However, these videos, found on multiple platforms, are of variable quality, may not have peer review, and are often too lengthy to be of utility on a busy shift. A Google search of "shoulder physical exam" videos yields results ranging from 5 to 22 minutes in duration. While videos of this length may be useful for education off-shift, they are not practical on-shift with multiple patients waiting to be seen.

ED providers of all levels may benefit from access to a compendium of peer-reviewed, highly structured, brief (less than two minute) videos that present a just-in-time refresher on the essential components of performing and documenting physical exams. Our purpose is to create a library of brief physical exam videos for the purposes of just- in-time education and training, with the goal of improving exam performance and documentation that requires minimal preparation time.

METHODS: The videos will feature an emergency physician demonstrating a physical exam on a volunteer with explanatory audio and text. Topics will be chiefly orthopedic, neurologic, ophthalmologic, trauma, and others that have multiple components or complex maneuvers. All videos will be two minutes or less in duration. They will be filmed in the Mount Sinai Simulation Teaching and Research (STAR) Center. All videos will undergo peer review by a senior emergency physician with expertise in the area. There will be an explicit checklist for completeness, relevance and critical points. Depending on the platform used, the videos will be easily accessed through a website or hyperlink in the electronic health record system.

An IRB exemption application is currently in process to evaluate the efficacy of a just-in-time educational video on exam performance and documentation. Evaluation methods include use of a standardized patient encounter in a simulated setting, with appraisal of the exam's performance and documentation by specialist reviewers, as well as use of self-assessment surveys.

RESULTS: With regular application of the videos, ED providers should perform more comprehensive physical exams, carry out exam maneuvers properly, and produce more thorough and accurate documentation, without compromising preparation time. By watching the videos and then performing the exams themselves, providers will also derive an educational benefit by use of a just-in-time resource.

CONCLUSION: Just-in-time physical exam videos may serve as an innovative educational resource for providers at all levels working on-shift in the emergency department.

ABSTRACT #20

THE CREATION OF AN INTERGENERATIONAL LEGACY PROJECT THROUGH A VIRTUAL PLATFORM AS A TOOL TO DECONSTRUCT AGEIST ATTITUDES AMONG PRE-CLINICAL MEDICAL STUDENTS

AUTHORS: Cecily McIntyre, Krsna Kothari, Dayle Lapolla, Noelle Marie Javier

PURPOSE: Medical students and their future patients will benefit from positive attitudes towards older adults. The study fosters the development of intergenerational relationships – which have been shown to challenge ageist stereotypes – between pre-clinical medical students and older adults through the co-creation of legacy projects. Legacy projects materialize poignant moments in a person's life. Co-creating a legacy project requires active listening and collaboration, and serves as an ideal setting for the development of a meaningful relationship. Furthermore, understanding the effect of virtual settings on intergenerational relationship-building is paramount during the COVID- 9 era. We investigate the feasibility of a structured, online intervention to deconstruct ageist attitudes among pre- clinical medical students.

METHODS: This study uses an interventional pre-post design questionnaire. Six pre-clinical medical students were randomly paired with six older adults (recruited from the Mount Sinai Department of Geriatrics and Palliative Medicine). Prior to meeting the older adults, the medical students attended three expert-led didactic sessions about ageism and intergenerational programs with access to concrete examples of legacy projects. The intergenerational dyads met six times with available guidance to create a legacy project together over the course of the meetings. Due to the COVID-19 pandemic, the dyads met over Zoom technology. Surveys addressing ageist beliefs were administered to pre-clinical medical students and older adult participants before and after the six sessions. Mid- intervention and post-intervention semi-structured interviews were also administered to participants from both age groups as an opportunity for them to debrief and reflect on their experience.

RESULTS: Results will be available in March pending the completion of the six sessions.

CONCLUSION: Ageist attitudes represent a significant barrier to the provision of high quality medical care for older adults in the United States. Structured, zoom-based relationship-building through the creation of intergenerational legacy projects may serve as an opportunity to increase positive attitudes towards older adults among pre-clinical medical students.

ABSTRACT #21

SIMULATION BASED EDUCATION OF PATIENT EXPERIENCE TO EMERGENCY MEDICINE RESIDENTS

AUTHORS: Heidi Baer, Eric Legome, Kaedrea Jackson, Saira Mehmood, Joshua McHugh, Daniel Satnick, Steven J. Bolger, Yasamin Soltanianzadeh

PURPOSE: Emergency Medicine (EM) has seen an increasing focus on the importance of patient experience. The rising attention to this area of interest has yielded over 107 publications since the year 2011, literature which has shown patient experience to be highly correlated with improved patient outcomes, increased profit, and achievement of hospital quality goals.

Patient experience surveys are a driving force for modification and improvement practices for both Academic and Community Institutions. Despite the weight which these surveys hold from an administrative standpoint and in measuring physician performance, EM resident education and understanding of these surveys in teaching hospitals remains limited. There have been recent publications which describe classroom-based curriculum for patient experience as well as simulation-based empathy training. However, to date no study has utilized in-situ simulation to create a validated curriculum guided by the principles of patient experience surveys.

This abstract outlines the implementation of a longitudinal simulation curriculum to teach patient experience driven patient-physician interactions amongst EM residents at our teaching institution. This curriculum was based on an objective checklist which incorporates previously validated patient experience surveys.

METHODS: In order to analyze the patient experience, our Emergency Department administration leadership and the Simulation Division worked to create a curriculum for our residents that focuses on the patient-provider interaction. Six content experts, familiar with patient experience/satisfaction, simulation, and debriefing, worked together to create two types of patient presentations commonly seen in the emergency department.

Residents were prebriefed prior to each case. Subsequently, a resident participated in a simulated patient interaction while several residents observed the interaction. Our content experts used a checklist during the scenario to review which objectives were covered. Content experts then debriefed all participants with an emphasis on the pre- determined criteria for an effective and meaningful patient experience.

RESULTS: General sentiment was positive with regard to the curriculum. Residents felt that the experience would improve their patient interactions. There were several common learning points among residents that recurred during the debrief. These included asking the patient open ended questions, recapping with the patient, strategies for managing patient expectations, and explaining next steps for management to the patient.

ABSTRACT #21 (CONT)

CONCLUSION: Simulation and debriefing focused on the patient experience is an immersive way to engage residents. Residents believe this curriculum will enhance their future interactions with patients. Although there are numerous variables in the Emergency Department contributing to patient interaction, we believe that optimizing frontline provider interactions will lead to increased satisfaction from both patients and physicians.

ABSTRACT #22

SCRUBBING SOAP: RETHINKING RESIDENT PRESENTATIONS IN THE OUTPATIENT SETTING

AUTHORS: Devorah Edelman

PURPOSE: Medical students traditionally learn to present in a temporally linear style. In the commonly used SOAP format, one presents the history followed by review of systems, exam, assessment, and plan. While this format lends itself well to emergency or inpatient settings, its relevance to outpatient is less clear. Outpatients often have multiple complaints, asymptomatic chronic problems, care coordination needs, and preventive health care to address.

Adapting oral presentations to synthesize and transmit salient details can result in significant cognitive burden on both preceptors and residents. With this in mind, we sought to pilot utilization of "Problem-Based Check Out" (PBCO) created by the University of Alabama and assess its efficacy in our residency program.

METHODS: Internal medicine residents who are based the William F. Ryan Community Health Center for their primary care practice were sent a pre-intervention survey to assess attitudes towards the checking-out process in clinic.

Residents in their first year (PGY-1) and second year (PGY-2) were taught the format of PBCO and asked to apply it when presenting to an attending. The concept of PBCO is to frame a presentation with an opening statement that includes the patient's major medical problems and timing of previous visit, then state problems addressed. Each issue is then reviewed in order of importance. After each, the presenter pauses to allow the attending to provide feedback and instruction. The intervention was assessed after two cycles of outpatient rotations. Resident feedback was assessed via survey.

RESULTS: A total of 56 residents completed the pre-intervention survey (25% PGY-1, 48.2% PGY-2, 26.8% PGY-3). Of these, 25% lacked a standard way of presenting in outpatient clinics. The most common factor was perceived preceptor preference (70.3%), followed by type of visits (48.6%), and time constraints (40.5%). After completing two PBCO cycles, residents were sent a post-intervention survey (at time of this assessment, only two cycles were completed). All residents who completed the survey (100%, n=8) responded that PBCO was more effective than SOAP in the outpatient setting. Most (85.7%) felt that using PBCO as a standard way of presenting would be helpful and agreed that this format improved/streamlined their thought process and organization. Many (66.6%) felt it improved efficiency and dynamic with preceptors. Fewer (33.3%) agreed that PBCO decreased cognitive load or improved ability to agenda-set with patients.

CONCLUSION: Although residents are often tethered to the SOAP format, this study offers compelling preliminary data that PBCO may be an effective method of presenting in outpatient settings. As the study is limited by small sample size of its post-intervention survey respondents, a next step may be to survey attendings on the PBCO format. Our findings suggest that PBCO may be useful in teaching residents how to best synthesize and present their assessments to supervisors and colleagues.

ABSTRACT #23

CULTURAL HUMILITY AND STRUCTURAL COMPETENCY IN MEDICAL PRACTICE: A LEARNING SESSION FOR TRAINEES ACROSS SPECIALTIES

AUTHORS: Emily H. Hertzberg, Kenneth Ashley, Rui Jiang, Betty Kolod, Maria Maldonado, Nicole B. Ramsey, Brijen Shah, Richard Silvera, Edward Poliandro, Barbara Warren

PURPOSE: The purpose of this work is to evaluate a cultural humility, implicit bias, structural competency, and health equity educational session for trainees.

METHODS: This educational session for trainees is a product of the ACGME-sponsored Healthcare Disparities Collaborative. A two-hour interactive session was given in person or virtually to trainees of multiple specialties and training sites in the Mount Sinai Health System. The session was assessed with a 10 question pre- and post-survey using a Likert scale to evaluate for understanding of concepts and ability to implement bias mitigation techniques.

RESULTS: The educational session was presented 10 times between December 2019 and December 2020 and reached 239 trainees. Attendees were trainees in MSH (Mount Sinai Hospital) Internal Medicine (n=66), MSM (Mount Sinai Morningside) Internal Medicine (n=70), MSBI (Mount Sinai Beth Israel) Psychiatry (n=20), MSH Pediatrics (n=30), and MSW (Mount Sinai West) Internal Medicine (n=53). We found an upward trend in understanding from pre- to post-survey, when examining aggregate data from all 10 sessions. Prior to the session, less than 10% of trainees felt they were most skilled in describing institutional racism and its impact on patient care; following the session, 35% of trainees felt most skilled in applying their understanding of institutional racism to improve patient outcomes. Prior to our session, 22% of trainees responded to the prompt "I am able to implement a technique to mitigate my implicit bias" with moderate to high knowledge, while 80% reported moderate to high knowledge following the session. Additionally, pre-session, 25% of trainees had moderate to high abilities to teach strategies of patient care with principles of cultural humility, while following the session, 75% of trainees felt moderate to high abilities to teach these concepts.

CONCLUSION: Our educational session succeeded in providing cross-specialty education on topics of cultural humility, structural humility, institutional racism, and health equity and an introduction to mitigation techniques. We found an overall upward trend in knowledge as well as ability to implement the new techniques and education to patient encounters. These sessions will continue in 2021 with a plan to reach trainees in additional specialties. Future directions include assessing post-session practice changes and incorporating patient feedback from a patient advisory board.

ABSTRACT #24

EFFECTIVE SCIENTIFIC COMMUNICATION - NEEDS ASSESSMENT SURVEY

AUTHORS: Subrat Das, Nicole Littman, Georgina Osorio

PURPOSE: Effective scientific communication is as important as conducting good research. Good scientific writing entails an important skill set that needs to be nurtured and developed. While there are a few online resources to this end, none is tailored to the specific needs of a medical professional in training. To further inform us about the unmet needs of the residents we planned to do a needs assessment survey.

METHODS: A questionnaire-based needs assessment survey was administered to all residents in our IM residency program. Google forms with QR code and hyperlink-based access was utilized to ensure high response rate.

Questions were broadly divided into demographics (limited to the year of training), previous research experience, future career plans, comfort with manuscript preparation, social media use in research dissemination, and preferred method of learning. No identifying data was collected. Majority of the questions were multiple choice with free text allowed to capture subjective responses. The survey link was shared during didactics session, consisted of 15 questions, and was expected to be filled by the residents at leisure.

RESULTS: A total of 50 responses were received, a response rate of 35%. 56% of responses came from first year residents. Only 4 had previous formal training in conducting research (MPH or PhD). 80% wanted to pursue sub- specialty training post-residency and 62% were involved in research prior to starting residency. A mere 8% had ever taken a course in scientific writing and half of the respondents were not aware of the use of reference managers in manuscript preparation. Only 40% of the respondents used social media to promote their own research or follow other researchers. Majority of the respondents used either Twitter or Instagram (45% each). 32% chose didactics/ classroom teaching and 46% self-paced video-based learning as the preferred learning approach.

CONCLUSION: We found that there is a definitive need and great interest for a formal curriculum in scientific writing.

ABSTRACT #25

IMPROVING DOCUMENTATION OF PEDIATRIC OVERWEIGHT AND OBESITY BY RESIDENT PHYSICIANS

AUTHORS: Vickie Wu, Carolyn Rosen, Leora Mogilner

PURPOSE: Pediatric overweight and obesity have increased in prevalence over the last few decades. Despite expert guidelines that provide recommendations on pediatric overweight and obesity screening, prevention, and management, these disorders are underdiagnosed, and providers often deviate from expert guidelines. The appropriate education of resident physicians, who serve as front-line providers for many patients and play an important role in caring for them, is critical. The objective of this study is to evaluate the effectiveness of educational interventions on the screening and management of pediatric overweight and obesity by resident physicians.

METHODS: We performed a pre-intervention chart review of preventive visits conducted by residents at an academic continuity practice. Charts of patients 2-18 years old with BMI ≥85th percentile for age and sex at the visit were reviewed (overweight defined as BMI 85th to <95th percentile; obese defined as BMI ≥95th percentile). Data collected included anthropometric measurements, diet and physical activity documentation, diagnoses made, screening labs/referrals provided, and resident training level. The interventions included a lecture on overweight/obesity definitions, screening and management recommendations, an information card outlining screening and management algorithms attached to computers in the clinic workroom, a Best Practice Advisory alert in the electronic medical record, and a handout outlining healthy lifestyle tips. Post-intervention, we performed chart review to assess the impact on diagnosis and counseling patterns. Descriptive data were calculated; comparisons were performed using 2 or Fisher's exact test. The study was deemed exempt by the Icahn School of Medicine IRB.

RESULTS: Of 1490 total charts reviewed, the number of patients with either overweight or obesity was 667 (44.8%). There were 392 patients in the pre- and 275 in the post-intervention groups. There was no significant difference in baseline characteristics between the two groups. After implementation of resident-focused educational interventions, documentation of diet, physical activity, and family history all significantly increased ($p<0.05$); however counseling about diet, physical activity and portion size did not. Correct overweight diagnosis by residents increased from 25.7% to 56.4% ($p<0.0001$). Similarly, correct obesity diagnosis increased from 60.8% to 84.5% ($p<0.0001$). Compared to patients with overweight, patients with obesity overall were more likely to receive screening labs and counseling on diet, physical activity, and portion size (all $p<0.05$).

CONCLUSION: Implementation of resident-focused educational interventions improved residents' diagnosis of overweight and obesity but not frequency of counseling. Additional efforts are needed to further boost diagnosis rates and improve counseling efforts, and further studies will ascertain whether this then translates into positive behavior changes and improved clinical outcomes.

ABSTRACT #26

A NOVEL, VIDEO-BASED, OPHTHALMOLOGY SKILLS CURRICULUM FOR INCOMING OPHTHALMOLOGY RESIDENTS

AUTHORS: Shravan Savant, Nisha Chadha, Douglas Fredrick, Harsha S. Reddy

PURPOSE: Given limited pre-residency ophthalmology exposure, skill training for PGY-2 ophthalmology residents (POR) is essential. However, orientation experiences vary, and skills acquisition is often not measured. A novel video- based orientation curriculum was developed and implemented to standardize and effectively teach exam skills to POR.

METHODS: An instructional video library (VL) on ophthalmic exam skills was created. Prior to any instruction, PGY2s were recorded performing basic ophthalmic exams (BOE) using slit lamp-recording smartphone adapters. After a 2- week orientation involving live teaching, practice, and self-directed VL review, BOEs were again recorded. A 36-point ophthalmic exam skills checklist expanding upon the Ophthalmic Clinical Evaluation Exercise (OCEX) was developed for scoring videos. Residents also completed pre- and post-surveys assessing their comfort with the BOE.

RESULTS: 7 POR participated. Average recorded OCEX score improved from 16.5 +/-5.8 to ($p=0.0002$) to 30.9+/-: 2.7 Surveyed resident comfort with the exam increased from 2.4 +/-0.6 to 4.2 +/- 0.5 on a 5-point Likert scale ($p<0.0001$).

CONCLUSION: Our VL curriculum was effective in rapidly increasing resident comfort and BOE skills. With the launch of the integrated internship model, the VL curriculum may be effective for training ophthalmology PGY1s, medical students and non-ophthalmology providers.

ABSTRACT #27

NEUROSIM: NEUROLOGY CURRICULUM THROUGH WEB-BASED INTERACTIVE LEARNING

AUTHORS: Daniel Santos, Samira Farouk, Laura Stein

PURPOSE: While medical school curricula have shifted toward interactive problem-based learning, residency training frequently relies on lecture-based didactics and bedside learning. Learning can be limited by patient exposure and practice. We sought to supplement and reinforce neurology training by increasing trainee exposure to atypical disease presentations, contemporary diagnostic tools, and challenging management decisions. We also wanted to solicit learner input on the best tools for interactive learning and effectiveness of a new learning platform.

METHODS: Needs assessment surveys of PGY2 to PGY4 neurology residents were conducted to evaluate subjective gaps in training and use of online learning materials during medical school and residency. We created NeuroSim (www.neurosimg.org), an interactive website with case-based learning and multiple-choice questions to supplement resident training curriculum. Adapted from NephSim, NeuroSim is the third in the Sim Series, a collection of medical teaching websites. We use WordPress, a self-hosting online software, funded and maintained by the Department of Neurology Residency Program at the Icahn School of Medicine at Mount Sinai. Cases are based on topics outlined in the American Academy of Neurology Resident Core Curriculum. Cases are created by senior PGY-4 residents, supervised and edited by chief resident of education as well as neurology faculty. On December 9th 2020, NeuroSim.org publicly released 8 interactive cases, each involving 5 – 10 imbedded multiple-choice questions. Since launch, 1-2 new cases have been added every month. Each case contains an optional feedback survey at completion.

RESULTS: 79% (n=23) of residents responded to the baseline needs assessment. While 91% (n=21) described using online interactive resources during medical school and 83% (n=19) rated online interactive resources in the top 3 of resources utilized in medical school, only 35% (n=8) described their use during residency. 91% (n=21) felt online interactive cases and questions would beneficially supplement their resident training, and 78% (n=18) felt that developing cases or questions would help them master a specific topic. Since launch we've averaged 96 visitors per month. 6 visitors have completed post-case surveys, including medical students, neurology residents, and non- neurology providers. Feedback has been positive. All 6 visitors strongly agree that cases help them understand the topic discussed and helped them build on their understanding of neurology. One visitor mentioned "I am a pediatrician and this year ended a master in epilepsy, NeuroSim is better" and another called NeuroSim "a great studying resource."

CONCLUSION: NeuroSim is an innovative online interactive learning platform with potential to supplement the learning of neurology and bridge training gaps among neurology trainees. Data collection is ongoing, but early feedback suggests that the platform and curriculum amplifying the learning of complex topics in across learner levels.

ABSTRACT #28

ADDRESSING IMPLICIT BIAS AND STEREOTYPE THREAT IN THE CLINICAL ENCOUNTER: A DIGITALLY-ENABLED TRANSFORMATIVE LEARNING APPROACH TO ADDRESS HEALTHCARE DISPARITIES IN DERMATOLOGY AND BEYOND

AUTHORS: Mary Sun, Britney Wilson, Jenny Murase, Gary Butts

PURPOSE: Positive relationships between patients and providers improve the quality of healthcare delivery and lead to better health outcomes. However, these experiences are systemically threatened by implicit bias and stereotype threat, two social phenomena that differentially affect minority groups and often potentiate each other. The automatic associations underlying implicit bias can perpetuate experiences of stereotype threat, an adverse psychological predicament that occurs when an individual who has internalized negative stereotypes about their social group and/or other diverse identities is put in a situation where they must confront those stereotypes. Stereotype threat contributes to racial and gender performance gaps, many of which exist in medicine. Biases can negatively affect the care received by minority patients, discourage those patients from seeking care, and contribute to the myriad barriers experienced by minority providers, ultimately amplifying existing healthcare disparities.

To address implicit bias and stereotype threat in clinical interactions, we take a transformative learning approach to the development of digital teaching curricula for medical trainees and physicians. While the principles of our curriculum are generalizable and can be expanded, our current efforts are intended for dermatology. Dermatology is one of the least racially diverse specialties, where access to race-concordant visits is limited for minority patients.

METHODS: Consensus methods were used to synthesize evidence-based conceptual frameworks relevant to implicit bias and stereotype threat. Transformative learning theory informed the instructional design, which incorporates active learning exercise alongside didactic instruction.

RESULTS: We have collated implicit bias and stereotype threat teaching materials, to be structured as digital streaming modules, intended to assist dermatology trainees and providers with addressing situations of implicit bias and stereotype threat that may occur in clinic. The curriculum steps through hypothetical patient visits to identify susceptible elements throughout the dermatologic encounter. A three-point action plan is presented to participants for future use in clinical settings and focuses on increasing representation within all aspects of the patient visit, employing communication techniques to understand patient perspectives, and empathically fostering connection.

CONCLUSION: Our innovative course can be applied to achieve skill development for dermatology providers in recognizing and managing implicit bias and stereotype threat. We are currently developing a protocol to assess the impacts of our curriculum on the clinical experiences of minority patients. Furthermore, we are working with the Diversity Innovation Hub to launch a service-learning fellowship opportunity for medical students. Ultimately, we hope this work can improve the quality of patient-doctor relationships in clinical settings and affect better health outcomes for minority patients.

ABSTRACT #29

ENGAGING PHYSICIAN TRAINEES THROUGH BEDSIDE ICU NARRATIVES

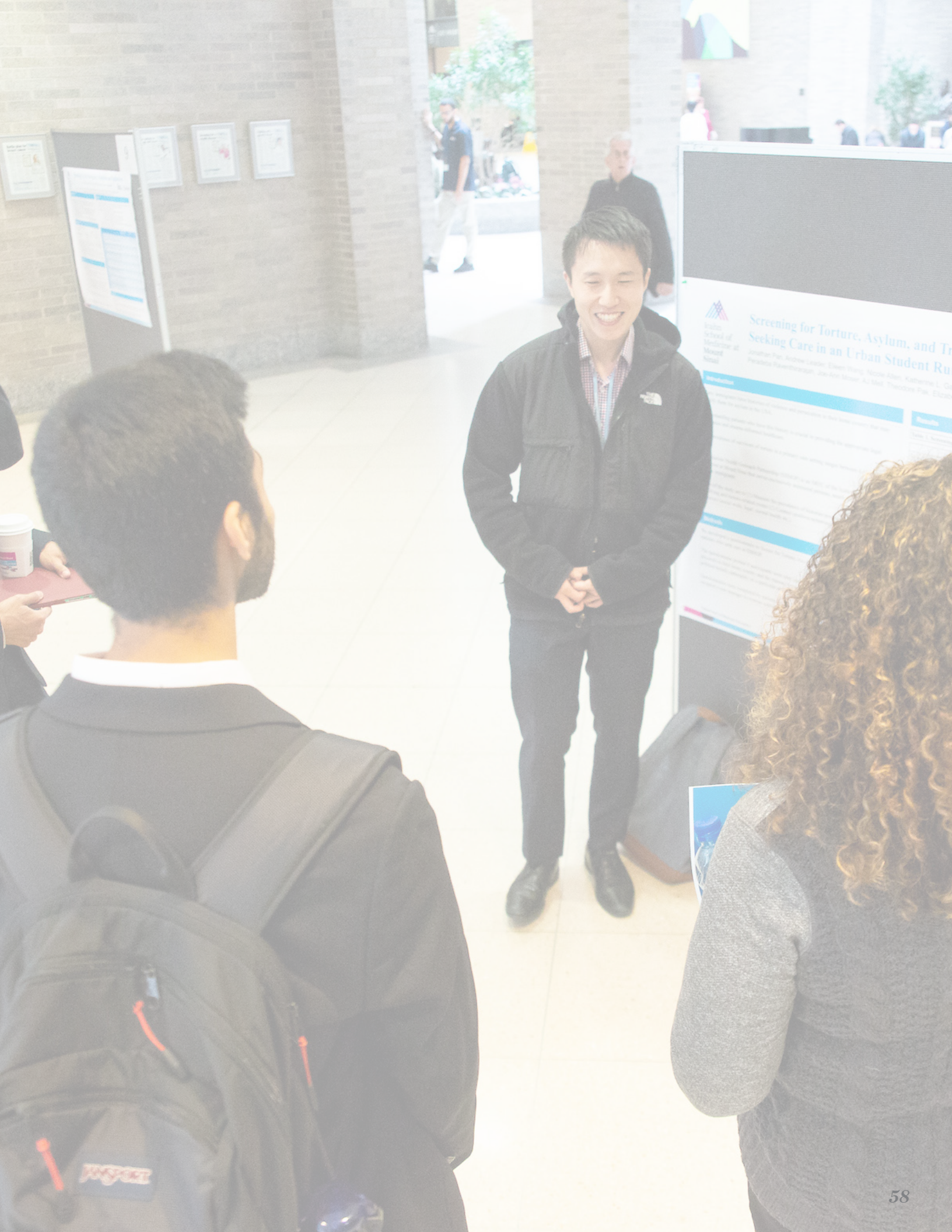
AUTHORS: Christine Nguyen, Alexander Davidovich, Jonathan Stoever, Deep Patadia, Tal Shachi, Jessica Montanaro, Beverly Smith, Janet Shapiro, Mirna Mohanraj

PURPOSE: Physicians in the ICU treat patients with complex diseases in an environment where at patients are at risk for dehumanization. This risk was dramatically increased during the covid-19 pandemic. The study instituted a narrative medicine practice to better understand critically ill patients on a personal level in order to humanize the patient experience, foster a deeper sense of fulfillment for physician trainees, and assess the impact on their attitudes and experiences.

METHODS: We designed a questionnaire to elicit patient biographic information which was shared on daily inter- professional rounds. ICU patients with anticipated stay greater than 48 hours were enrolled. Residents in the ICU were enrolled to study impact. After 2 to 4 weeks of exposure to the intervention, semi-structured interviews were conducted and residents completed an internally validated questionnaire addressing their attitudes, and experiences. An iterative qualitative analysis of interview transcriptions generated thematic categories of response.

RESULTS: 20 patient biographies were completed. Nineteen resident physicians were enrolled. 53% of residents spent more time eliciting personal information; 68% spent additional time at the bedside; 95% reported improved rapport with surrogate; 63% felt more enthusiasm for ICU care; 79% reported increased meaning from work. Residents also reported increased sense of responsibility, additional time with surrogate, and a compulsion to monitor patients beyond the routine. The following are representative comments from the thematic categories. Humanization: "It's much better to [know] a patient [as] 'the patient that likes sushi' or 'the patient that's an author' or 'the one with 17 grandchildren' rather than calling them 'room 25' or 'GI bleed'." Communication and relationship building: "It strengthened our resolve and our ability to conduct goals of care." Patient care: "I liked the picture. Seeing them how their family and friends see them. Pushes us to get them back to the person they were in that picture." Fulfillment: "It wasn't just going to work. It was going to work to care for a person with accomplishments and values and interests." Emotions/burnout: "...the humanized aspects should be included [on rounds]. Because we're not robots."

CONCLUSION: Sharing patient biographies improves humanistic care in the ICU. Residents perceived the intervention as humanizing and felt that learning patient biographies may positively impact delivery of care. Emotional responses were perceived as helpful and challenging, which may mitigate physician burnout, improve ICU moral climate, and enhance fulfillment from work. Humanizing the ICU likely had a more profound impact given extreme patient isolation and physician stressors due to covid-19. The intervention is feasible and reproducible. This novel narrative medicine approach rejuvenates opportunities for humanistic medical care, facilitates rapport-building, and increases the meaning derived from work.


Screening for Torture, Asylum, and Tr
Seeking Care in an Urban Student Ru

SECTION 5:

Curriculum (UME)

POSTERS 30–40

ABSTRACT #30

"A NEW STUDENT-LED DIGITAL DRAWING COURSE: AN INITIATIVE TO BRIDGE PATIENT HEALTH LITERACY THROUGH MEDICAL ILLUSTRATIONS"

AUTHORS: Rebecca L. Kellner, Alexandra Agathis, James Moon, Brian Coakley

PURPOSE: Health literacy and health inequity have emerged as extremely significant social issues currently facing the medical community. Despite in-depth verbal explanations and language translation services, many patients fail to understand the anatomy related to medical conditions and operations being offered as valuable treatments. We proposed introducing medical students to a digital drawing platform to facilitate the delivery of clear healthcare communication and more equitable care. Our study set out to evaluate how an instructional course on digital drawing would impact the likelihood of medical students to utilize medical illustrations in future patient encounters.

METHODS: "Draw Your Way Through Medicine" is an elective course in digital medical illustration, offered at the Icahn School of Medicine at Mount Sinai. The nine-week course hosted weekly virtual lectures and workshops during the fall 2020 semester. The first three lectures introduced students to digital drawing concepts through the Procreate iPad application, while the remaining lectures focused on using visual explanations to depict specific pathologies and procedures. Students completed pre-and post-course surveys which utilized a 1 to 5 Likert scale and included both multiple-choice and free-response questions. Statistical analysis was performed using paired t-tests.

RESULTS: A total of 36 students enrolled in the course, 27 of which completed the pre-course survey while 21 completed both pre-and post-course surveys. The pre-course survey cohort was majority female (63%) and contained more students from preclinical years (85%). Enrolled students reported a strong perceived value in drawing as a communication tool (4.57), especially in the clinical context (4.76) prior to the course. Further, both before and after the course, enrollees felt that a digital drawing platform could enhance patient satisfaction (4.62 to 4.71, $p=0.59$).

Students' comfort level with drawing improved from after course completion (3.14 to 3.48, $p=0.27$), specifically in reference to medical visuals (2.24 to 3.67, $p<0.01$). Qualitative responses echoed the perceived value and enthusiasm for implementing digital drawing as a clinical communication tool.

CONCLUSION: The introduction of a digital drawing course showed the considerable value in improving medical students' confidence in generating medical illustrations. Moving forward, the course should be expanded to additional audiences and focus on implementing this platform in actual patient encounters.

ABSTRACT #31

MD++ SUPPORTING A NEW GENERATION OF PHYSICIAN-INNOVATORS

AUTHORS: Sherman Leung, Brenton Fargnoli

PURPOSE: Physician-led innovation in the broader healthcare industry through technology, business, and the life sciences has been an emerging career path. However, few medical schools provide the infrastructure to pursue these hybrid career interests alongside medical education. I started MD++ (mdplusplus.org) to connect and empower this next generation of aspiring physician-innovators, now the largest community of entrepreneurial medical students with over 600 students from across the country.

METHODS: Over the last 5 months, we received 200+ responses as students signed up for the MD++ community. These questions specifically inquired about the students' intention to continue with residency and post-residency balance. In addition, we surveyed the students' backgrounds prior to medical school and knowledge of entrepreneurial support at their institution.

RESULTS: The most common response to "Will you pursue residency after medical school?" was 5/5 on a scale of "Definitely not" being 1 to "Definitely pursuing residency" being 5. 60.9% of students answered 5/5 with 4/5 being the next most common answer at 23.4%.

When narrowed down to students who were the most confident in their future career plans who "definitely want to be a physician-innovator", we saw an increase to 74.4% who were "definitely" pursuing residency. When surveying the students that had at least one year of full-time work experience, we also saw an increase to 64.9% of students who were "definitely" pursuing residency after medical school and 76.3% of students who "definitely want to be a physician-innovator".

We also asked, "If you wanted to pursue a non-clinical or non-research oriented experience (e.g., consulting/industry internship), do you feel that you have support from your school?" to which the majority of students responded "Not Sure" (40.6%) followed by "Somewhat" (29.9%), "Definitely" (18.3%), and "Not at all" (11.2%).

CONCLUSION: Data from this cohort revealed that the overwhelming majority of students (especially those who have had prior work experience) intend on continuing on with residency (83.4%) and combining active clinical practice with these non-clinical interests. However, medical schools can do more to better support and bring awareness to these hybrid career paths for physician-led innovation in technology, business, and life sciences.

ABSTRACT #32

DESIGN AND IMPACT OF A NOVEL OTOLARYNGOLOGY VIRTUAL SUB-INTERNSHIP IN THE TIME OF COVID-19

AUTHORS: Aldo V. Londino, Benjamin M. Laitman

PURPOSE: To discuss the design and impact of a novel otolaryngology virtual sub-internship created as a substitute for the visiting electives that were suspended due to the COVID-19 pandemic.

METHODS: A two-week virtual elective was designed and registered with the Visiting Student Learning Opportunities (VSLO) program. The virtual elective consisted of two blocks held during the first two weeks of August and again during the first two weeks of September. A total of 12 medical students enrolled, 5 in August and 7 in September. Surveys were distributed at the beginning and end of the rotation to obtain feedback and assess impact.

RESULTS: Over the course of the rotation students participated in a total of approximately 60-70 hours of virtual interactive sessions including clinical and surgical lectures, resident Q&A panels, hospital and home virtual tours, alumni information sessions, faculty "Meet & Greets" and structural/organizational program overviews. Each visiting student delivered an end-of-rotation presentation to the department on a clinical topic or research interest of their choice. Post-rotation survey data suggests the virtual rotation was an important and meaningful opportunity for visiting students to better understand the program structure and culture. Students felt the rotation was influential in the creation of their rank lists and should continue to be offered even after in-person sub-internships resume.

CONCLUSION: Although there is no substitute for an in-person visiting sub-internship, a well-designed virtual elective can be an interactive, worthwhile and impactful alternative during these challenging times.

ABSTRACT #33

AN INNOVATIVE APPROACH TO DEMONSTRATING CLINICAL REASONING IN A VIRTUAL CLERKSHIP

AUTHORS: Christopher Richardson, Jamie Edelstein, Jennifer Beck-Esmay, Felipe Serrano, Chris Hahn, Chen He

PURPOSE: We developed a "virtual" Emergency Medicine clerkship to replace our traditional elective rotation during the COVID-19 pandemic. While converting didactics to a remote-learning format was straightforward, we realized that we also needed to allow students to demonstrate fundamental clinical reasoning skills inherent to the practice of Emergency Medicine: evaluation of an undifferentiated chief complaint with a focused history; synthesis of clinical data and underlying medical knowledge to formulate an assessment, differential diagnosis and management plan; and communication of this in a succinct manner. Traditionally, such skills are demonstrated by the student evaluating real patients and presenting to a faculty preceptor. We sought to replicate this interaction for the new virtual reality.

METHODS: We developed a virtual precepting session based on six clinical cases. For each case, we provided students a packet of preliminary clinical data (e.g. mock EMR notes, photos of physical exam findings, and quotes from the patient's history of present illness). As in real life, some of this data was irrelevant to the acute issue.

Students were given time to review the materials and paired with an attending physician for a one-on-one mock precepting session. This began with the student presenting the "patient" and providing an assessment/plan.

Preceptors challenged students to justify their reasoning, then provided additional clinical data (lab results and imaging) to progress the case, which usually concluded with a mock phone call to a consultant. Following this, preceptors provided real-time feedback and tailored teaching points. At the end of the rotation we evaluated student perceptions of this activity using both Likert scale and free response questions.

RESULTS: Five students participated in this two-week course. All reported they strongly agreed they enjoyed the virtual precepting sessions and would recommend for a future virtual rotation. Most agreed that it felt like the type of teaching interaction they would expect when seeing a real patient. One theme that emerged from comments was that students felt the sessions truly focused on clinical reasoning more than medical knowledge since they had time to look up discrete facts about about each case in advance.

CONCLUSION: This format allowed for an interactive teaching session. In addition to positive reviews from the students, faculty felt these sessions allowed them to get to know each student and identify patterns in clinical reasoning deficiencies that might not be apparent when presentations are scattered intermittently during a busy ED shift. In an effort to limit preceptor time commitment we allotted 20 minutes for each encounter, but both students and faculty thought this was too short and in the future we will modify this to allow for 30 minutes per case.

ABSTRACT #34

MEDICAL STUDENT ATTITUDES TOWARDS THE USE OF PEER PHYSICAL EXAM LEARNING FOR THE FUNDOSCOPIC EXAM

AUTHORS: Daniel Henick, Margarita Labkovich, Jake Radell, Nitin Chopra, Nisha Chadha

PURPOSE: Peer physical examination (PPE) learning techniques are widely used in medical schools for pre-clinical physical exam instruction. While there is literature regarding medical student attitudes towards PPE, to date no studies have specifically examined student attitudes towards PPE with the use of pupillary dilation for the purposes of learning fundoscopy. This study sought to evaluate medical student preferences towards learning the fundoscopic exam and explore attitudes towards alternate approaches.

METHODS: First year medical students at the Icahn School of Medicine at Mount Sinai participated in a 2-hour fundoscopy skills workshop in March 2020. Following the session, a voluntary survey was administered regarding student attitudes towards PPE in general and specifically when learning peer fundoscopy. Primary study end-points of the survey, which employed Likert scale questions, included evaluating (1) the efficacy of the session's instruction, (2) student comfort conducting fundoscopy on a classmate and also serving as an examinee to a peer, (3) preferences for non-mydriatic fundoscopy if offered, and (4) empathy towards patients experiencing dilation. Secondary end-points focused on alternative teaching methods.

RESULTS: 51/140 students (36.4%) completed the survey, and attitudes towards PPE learning were largely favorable. 78% of medical students recognized PPE as a helpful instructional method to learn physical exam skills including fundoscopy. Students who found the use of PPE helpful when learning about the cardiac and comprehensive head and neck exam similarly endorsed the use of PPE when learning fundoscopy, $r(51) = .43$, $p = .0017$. The PPE-based fundoscopy session led to improved self-rated fundoscopy skills and empathy for the patients, $U = 677$, $p < .001$.

However, when given the choice between learning with dilated or alternative non-mydriatic techniques, 96% of students indicated a preference for using alternative non-mydriatic techniques. Over 40% of students said they would attend an optional follow up session to learn about fundoscopy with novel diagnostic approaches.

CONCLUSION: This study found that students' attitudes towards fundoscopy generally aligned with their overall preferences with regards to PPE. A PPE-based fundoscopy session also led to improved comfort with this skill and empathy towards patients undergoing this exam. Of note, students preferred learning via methods that did not require dilation and expressed interest in alternate fundoscopic techniques, such as smartphone fundoscopy. Awareness of student learning preferences for PPE and incorporation of novel instructional tools can help advance medical education and facilitate more successful skills acquisition in fundoscopy. These considerations are particularly important as medical education evolves in the context of COVID-19 and may assist with maintaining high quality education even within the virtual or alternate learning environments.

ABSTRACT #35

STAR: STROKE, THROMBECTOMY, AND ACUTE REVASCULARIZATION, A REPORT ON A NEUROLOGY EXPOSURE PROJECT

AUTHORS: Daniella C. Sisniega, Desiree M. Markatone, Emma Loebel, Michelle F. Fabian, Laura Stein

PURPOSE: Despite revolutionary developments in acute stroke treatment, there is a misperception that neurological disorders are devastating and untreatable. Additionally, many students experience "neurophobia" with difficulty applying complex neuroscience to clinical neurology. At the same time, we face a shortage of neurologists when the prevalence of neurological conditions increases. A needs assessment of 58 Icahn School of Medicine at Mount Sinai (ISMMS) third-year students revealed that 86% (n=49) had no clinical exposure to stroke before the neurology clerkship and 90% (n=52) thought they would benefit from additional stroke exposure during the neurology clerkship. We sought to increase pre-clinical exposure to acute stroke diagnosis and treatment and assess its impact on familiarity with a career in neurology, level of interest in neurology, and knowledge of acute stroke diagnosis and management.

METHODS: Pre-clinical students elected to participate in a 4-week clinical observation period (COP), during which they observed the number of acute stroke codes and revascularization cases they wanted. After the COP, participants attend a small group session to debrief the cases they observed. Students completed a Likert scale survey on familiarity with a career in neurology, level of interest in neurology, and knowledge of acute stroke at three time points: before the COP, after the small group session, and one year after completing the COP.

RESULTS: We recruited eleven participants over three months. Further subject enrollment was suspended due to the COVID-19 pandemic. Prior to the COP, 18% (n=2) of participants had seen a stroke code and only 9% (n=1) a thrombectomy. By the end of the COP, 90.9% (n=10) of participants had observed a stroke code and 45.4% (n=5) had observed a thrombectomy. Data were analyzed using a paired sample t-test. After the COP, participants reported increased familiarity with the jobs of neurologists (Likert mean= 2.9 vs. 4.45), vascular neurologists (Likert mean=2.36 vs. 4.27), and endovascular surgeons (Likert mean=2.36 vs. 4.18). Participants also reported increased confidence in their ability to recognize the signs of acute stroke (Likert mean 2.36 vs. 4.36), identify the vascular territory affected (Likert mean=2.09 vs. 4.45), and familiarity with acute stroke management Likert mean=2.27 vs. 4.54). Participants' baseline interest in neurology (Likert mean=3.9) remained high after the COP and at one year (Likert means= 4.3 and 4.2, respectively). Participants' surveys completed a year after the COP reported similarly high Likert scores in familiarity with the role of cerebrovascular specialists and confidence in clinical stroke knowledge.

CONCLUSION: While subject enrollment was limited, our results suggest that in pre-clinical students interested in neurology, clinical exposure to acute stroke diagnosis and management improves familiarity of the roles of cerebrovascular specialists and confidence in clinical stroke knowledge.

ABSTRACT #36

A NOVEL, ONLINE, CASE-BASED NEURO-OPHTHALMOLOGY WORKSHOP FOR NEUROLOGY CLERKSHIP STUDENTS

AUTHORS: Emma Loebel, Laura Stein, Michael Fara, Samira Farouk, Nisha Chadha

PURPOSE: Undergraduate ophthalmology education (OE) has declined, and innovative approaches are needed to integrate this content. The neurology clerkship offers an opportunity to incorporate OE, specifically within the often underemphasized discipline of neuro-ophthalmology. To address this educational gap, we developed an online, interactive, case-based neuro-ophthalmology workshop.

METHODS: Our study team, comprised of ophthalmology and neurology faculty, developed five high-yield neuro- ophthalmology cases and published them on 2020SIM.com. This website is an OE tool modeled off of NephSIM, a free open acess medical education (FOAMed) tool using Wordpress, a web publishing software. Neurology clerkship students participated in a 1-hour interactive workshop, during which our team's neurologists and ophthalmologist facilitated discussion of cases. Students completed anonymous pre- and post-tests and a post-survey.

RESULTS: A total of 68 students completed both the pre- and post-tests and 54 submitted the exit survey. Mean knowledge assessment scores increased from 8.03 (SEM 0.27) to 8.43 (SEM 0.16) (p=0.0044). The majority found the website reflected what is important in their neuro-ophthalmology training (n=44, 81%) and preferred the workshop to traditional didactics (n=37, 69%). Most students rated the difficulty of the cases as "just right" (n=39, 74%). Almost all recommend the workshop be offered in the future (n=49, 91%), and expressed a desire for similar learning tools in other specialties (n= 51, 94%).

CONCLUSION: Our novel, interactive, case-based neuro-ophthalmology tool increased student knowledge and was well- received by students. Collaboration with departments with which ophthalmology intersects can provide opportunities to increase undergraduate OE.

ABSTRACT #37

VIRTUAL REVIEW SESSIONS IN THE STRUCTURES COURSE IN A LARGE-GROUP, INTERACTIVE FORMAT

AUTHORS: Nicola Feldman, Mia Saade, Naoum Fares Marayati, Tyler Italiano, Daniella Curcio

PURPOSE: First-year medical students (M1s) at the Icahn School of Medicine at Mount Sinai begin their year with the Structures course, which covers gross anatomy, embryology, and histology. Second-year medical students (M2s) serve as teaching assistants (TAs) for this course, and their responsibilities include leading comprehensive review sessions prior to each set of exams. Historically, reviews have taken place in small-group classrooms, with groups of 10-18 M1s rotating through a series of rooms and each room providing rapid-fire review of a specific topic by several M2s. In 2020, the virtual setting imposed by COVID-19 restrictions demanded creativity to rethink the format of these review sessions, leading to the implementation of a large-group, interactive format, with all M1s in the same remote video session, covering material at a slower pace. This project aims to examine the effectiveness of this large-group, interactive format.

METHODS: The first two review sessions of Structures 2020 mimicked the traditional style, with groups of M1s rotating through a series of 20-minute Zoom sessions. For the last two review sessions, all students remained in one 3-hour Zoom session, and M2s covered certain material at certain times, with more or less time allotted depending on the difficulty and amount of material. M2 TAs also incorporated more interactivity, such as questions to students, in reviewing the material. We surveyed M1s regarding which format they preferred and also solicited qualitative feedback from M1s and M2s throughout Structures.

RESULTS: 55% of M1s preferred the large-group format, with 23% preferring the traditional format and 23% expressing no preference. Many M2 TAs also expressed preferences for the large-group format. In addition, qualitative feedback from M1s indicated that they appreciated the interactivity, such as quizzing students on high-yield points or using practice questions.

CONCLUSION: In the remote environment, most students preferred a large-group, interactive Structures review session format over the traditional small-group rotation format. This large-group style has several advantages. First, not all components of the session need to be the same length, which allows M2s covering more challenging topics to spend more time explaining them and also allows for interactivity with students, which can be challenging in a compressed timeframe. Second, M1s benefited from hearing answers to the questions that all of their classmates asked, rather than only those asked by a smaller group. Third, M2 TAs need only be available for a short period of time to lead their section of the review session, rather than spending hours repeating the same session multiple times. The effectiveness of this format may have implications once in-person instruction resumes; for example, review sessions could be conducted in a lecture hall, in an in-person setting, or virtually, in a hybrid learning system, to facilitate the advantages of the large-group interactive format.

ABSTRACT #38

OFFICE HOURS AS A METHOD FOR STUDENT SUPPORT DURING THE VIRTUAL SUMMER ENRICHMENT PROGRAM

AUTHORS: Nicola Feldman, Gabrielle Hernaiz-De Jesus, David Bechhofer

PURPOSE: The Summer Enrichment Program (SEP) is an intensive four-week pre-matriculation program for medical students entering the Icahn School of Medicine without significant background in biological chemistry and molecular/cell biology. Traditionally, teaching assistants (TAs) provide support by leading formal review sessions, using prepared material, immediately following each lecture series on a certain topic.

In 2020, the COVID-19 pandemic necessitated an all-virtual SEP held via Zoom. Understanding that virtual learning can cause preclinical students to feel isolated, we sought to provide increased opportunities for academic support and connection. In particular, TAs held weekly, informal "office hours" via Zoom as an open forum to answer student questions, a novel structure that was added to the usual TA review sessions and had not previously been included in SEP. Here, we aim to analyze the effectiveness of these office hours in supporting students in the virtual environment.

METHODS: TAs held office hours once weekly, the day after lecture material had concluded for the week, to give students time to digest the material. Office hours sessions were solely an opportunity for students to ask questions; no formal review material was prepared. After SEP had concluded, all SEP students were surveyed regarding these office hours, answering several questions on a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4
= agree, 5 = strongly agree).

RESULTS: Of 23 SEP students, 10 unique students attended at least one office hours session, with some of those students attending multiple sessions. Of students who attended at least one session, 100% of survey respondents answered "agree" or "strongly agree" to the statement "I found the TA office hours helpful." In addition, 90% of survey respondents answered "agree" or "strongly agree" to the statement "The fact that TA office hours were offered helped me feel more supported during SEP (even if I didn't attend any of the office hours)," and 80% answered "agree" or "strongly agree" to "Having office hours in all of my courses would make me feel more supported in a totally virtual learning environment." Qualitative comments also demonstrated the effectiveness of office hours in providing student support: students wrote, "I really appreciated getting to ask my specific questions during TA office hours," "[The TAs] were not just names via an email but people whose faces we saw and who provided us support," and "[Office hours] made me feel supported and like I had another way to get my questions answered."

CONCLUSION: Regular, informal office hours appear to be a strong pillar of support for students in the virtual learning environment and are relatively easy to implement, as they do not require advance preparation of materials. Educators may consider this strategy as virtual learning continues into 2021.

ABSTRACT #39

ADVANCE CARE PLANNING TRAINING IN A STUDENT-RUN FREE CLINIC

AUTHORS: Brittany Glassberg, Krsna Kothari, Emily Xu, Elizabeth C. Lindenberger, David Thomas, Yasmin Meah

PURPOSE: The East Harlem Health Outreach Partnership (EHHOP) is a student-run free clinic (SRFC) that serves the uninsured, largely immigrant, community of East Harlem. SRFCs have a dual mission in providing quality care to underserved populations and ensuring an effective learning and practice environment for students. Currently, hands on skills training regarding end-of-life (EOL) and Advance Care Planning (ACP) is unstandardized in SRFCs, with providers often inadequately prepared and lacking the cultural humility required to navigate these conversations. ACP prevents unwanted procedures, increases utilization of hospice and palliative care services, and empowers patients to take control over their EOL experiences. SRFC patients' EOL experiences can be complicated by severe symptom burden, language barriers, and lack of time for goals of care conversations. For patients who are undocumented, the identity documentation and legality of ACP forms can be particularly distressing. Despite these barriers, the COVID-19 pandemic has exemplified the need for regular EOL discussions. EHHOP has developed a curriculum for senior medical student-clinicians about ACP, tailored to working with the undocumented community in the primary care setting. Here we aim to assess the utility of this curriculum in improving student-clinician knowledge and comfort surrounding ACP.

METHODS: An ACP didactic session was designed by a team of palliative care physicians, primary care providers, and medical student leaders at EHHOP and taught to senior student-clinicians. The case-based, interactive session focuses on setting goals for EOL conversations, coaching patients through selection of healthcare proxy, and understanding cultural and legal challenges to ACP within the undocumented patient population. An ACP conversation template was provided to students at the conclusion of the session. A pre- and post-session survey was administered to assess knowledge and comfort surrounding ACP. The number of patients who underwent successful ACP conversations (defined by conversation resulting in completion of healthcare proxy documentation) was tracked, and student knowledge and comfort with ACP was reassessed at the conclusion of these discussions.

RESULTS: Fifty medical students participated in the ACP didactic session. A majority of participants improved in knowledge, as assessed by a greater percentage of correct answers regarding ACP definitions and procedures on survey post-session vs. pre-session. Student comfort with ACP also increased after the session, measured on pre and post-session surveys. Seventy ACP patient conversations were initiated at EHHOP by newly-trained student- clinicians.

CONCLUSION: This intervention led to implementation of formal ACP training tailored to patients in a SRFC. This improved medical student knowledge and comfort surrounding ACP, leading to initiation of 70 EOL conversations. This will reduce future stress for patients, families, and providers in emergent situations.

ABSTRACT #40

BRIDGING THE DISPARITY IN SKIN COLOR REPRESENTATION IN PRECLINICAL MICROBIOLOGY EDUCATION

AUTHORS: Madeline Kim, Kelsey Auyeung, Gabriel Santos Malave, Sidra Ibad, Eden David, Dante Dahabreh, Roberto Posada

PURPOSE: One of the numerous ways in which racism manifests in medical education is the scarcity of images of brown and black skin in didactic materials. Currently, the vast majority of dermatology images used in the preclinical courses at the Icahn School of Medicine at Mount Sinai (ISMMS) feature light-colored skin, leaving students ill- prepared to recognize dermatologic manifestations of disease in people of color. In this project, we focus on the microbiology module and hypothesize that incorporating high-quality images focusing specifically on skin of color into course material will increase the ability of students to identify common infectious disease-related conditions on brown and black skin.

METHODS: We compiled a collection of images of brown or black skin manifesting key conditions with bacterial, viral, and/or fungal etiologies to incorporate into the first-year 'Medical Microbiology' course at ISMMS. The images were retrieved from peer-reviewed journal articles and dermatologist-reviewed websites and were approved by the Medical Microbiology course director. To quantify the impact of incorporating these images into lecture material, we plan to administer a brief assessment to the class of 2023 with questions featuring fictional infectious disease cases, each with an image of light or dark skin, in order to evaluate the students' ability to identify these conditions on light versus dark skin. Their performance will be compared to that of the class of 2024, which will have been the first to complete the course with the new images included. We will also survey both cohorts on their confidence in their ability to recognize manifestations of infectious disease on light and dark skin before and after completion of the assessment.

RESULTS: Course evaluations from past years have included student concerns on the limited diversity of skin tones in lecture images. We anticipate that students of the class of 2024 who learn with these new images will perform better on cases involving dark skin and will indicate that the curricular change was a helpful addition. Performance on our assessment may vary based on personal experience, lecture attendance, performance in the course, and use of external study materials. The study is in its early stages and will be deployed this year.

CONCLUSION: Lack of familiarity with dermatological manifestations of microbial infections on varying skin tones may compromise quality of care in infectious disease treatment. Our curricular modifications aim to provide students with early exposure to diverse dermatological presentations of microbial infections and to cultivate an awareness of the variability in presentation that may be applied during future clinical encounters. Follow-up data collection will be necessary to determine the longitudinal effects of our work.


Attachment, Autonomy,
to Age 5
Luesse Ph.D • Carrie Quinn M.D.
CONCLUSIONS

SECTION 6:

Professional Development

POSTERS 41-48

ABSTRACT #41

ATTITUDES AND PERSPECTIVES OF NEUROLOGY FACULTY TOWARD NEUROLOGY RESIDENT WELL-BEING AND BURNOUT

AUTHORS: Adina Wise, Vicki Shanker, David Lucido, Matthew Swan

PURPOSE: Neurology residents have reported high rates of burnout relative to other specialties. The purpose of this study was to gauge the current attitudes of neurology faculty towards residents' well-being and burnout in order to inform the content and structure of future faculty development.

METHODS: We designed a 35-item questionnaire to obtain information about faculty demographics, workload, burnout and attitudes towards resident wellness. Our survey utilized Likert-style response options and survey questions were thematically grouped into one of three categories: 1) faculty-resident understanding (tendency towards empathy or understanding of resident experiences), 2) attitudes towards residency training overall, and 3) faculty perceptions of their own preparedness to recognize when residents are struggling due to fatigue or emotional exhaustion/depression. We also screened for symptoms of burnout among faculty using a validated single-item questionnaire. The survey was distributed via email to all neurology faculty at Mount Sinai's two neurology residency programs.

Group differences were assessed using t-tests and rank sum tests. Associations between categorical variables were assessed using cross tabulations and chi-square tests of association.

RESULTS: The survey was emailed to 113 neurology faculty and 42 surveys were completed (response rate 37.2%). The average age of respondents was 48.25 years (n=38) and 57% were female (24/42). Burnout was reported by 39% of respondents (16/41).

Female faculty members were more likely to report burnout (p=.02) and were more likely to provide responses indicative of faculty-resident understanding (p=.055). With a trend towards significance, female faculty members were more likely to express negative attitudes towards residency overall (p=.082). Fewer years in practice was also associated with greater understanding of resident experiences (p=.002) and with more negative attitudes towards residency overall (p=.045).

There were no significant differences in attitudes towards residency, faculty preparedness or faculty-resident understanding between neurology faculty with and without burnout.

CONCLUSION: Our study suggests that female faculty and faculty with fewer years in practice may have more negative attitudes towards residency and are more likely to express understanding of the challenges that current residents face. The presence or absence of burnout among faculty did not, in our study, inform perceptions of resident wellbeing.

ABSTRACT #41 (CONT)

Many early-career neurologists are recent residency graduates, which may provide an increased level of familiarity with current training practices. Female faculty may encounter unique challenges during training, impacting their outlook on this experience.

A multitude of alternate possible explanations for these findings exist and further exploration is warranted. These results may guide faculty development programs to help mitigate burnout and promote wellness among neurology residents and faculty.

ABSTRACT # 42

THE UTILITY OF MOCK VIRTUAL RESIDENCY INTERVIEWS DURING THE COVID-19 PANDEMIC

AUTHORS: Annie E. Arrighi-Allisan, Aldo V. Londino

PURPOSE: The COVID-19 pandemic has greatly disrupted the otolaryngology residency application cycle. Reliance on virtual meetings, virtual electives and virtual interviews has caused considerable apprehension for students and faculty alike. The use of in-person mock interviews has been shown to improve preparedness and confidence among interviewees. Less is known, however, about the utility of mock virtual interviews. This study explores the utility of a mock residency interview program in preparing otolaryngology applicants for a virtual interview format.

METHODS: Pre- and post-mock interview surveys were administered to 19 medical students applying into Otolaryngology residency. The mock sessions consisted of 15-minute standard virtual Zoom interviews with senior otolaryngology faculty at The Mount Sinai Hospital, followed by 15 minutes of feedback. Pre- and post-interview surveys contained 12 and 21 questions, respectively, targeting confidence levels, ease of communication, perception of non-verbal cues, technical difficulties, and overall satisfaction.

RESULTS: 17 applicants responded to both surveys, yielding an 89.5% response rate. Applicants were significantly more confident in their ability to perform well during a virtual interview following their mock session (40% confident before vs. 88.2% after, p=0.001). Approximately 30% of applicants experienced technical difficulties during their session. Ease of virtual communication (65.0% vs. 94.1%, p=0.002), concern over impaired perception of an interviewer's non-verbal cues (90.0% vs. 58.8%, p=0.03), and perceived lack of control (55.0% vs. 35.0%, p=0.04) all significantly improved following the mock interview program.

CONCLUSION: With new reliance on virtual platforms for communication during the otolaryngology residency application cycle, a mock virtual interview program is an impactful tool to help improve student confidence and preparedness. As virtual platforms in medicine become increasingly ubiquitous, further research is warranted to explore the longer-term impact these preparatory programs have on applicant success.

ABSTRACT #43

TRAINING AND TRANSFORMATION OF THE PEDIATRIC HEALTHCARE ENVIRONMENT TO PROMOTE POSITIVE PARENTING

AUTHORS: Aurora Lewis, Mariel Benjamin, Carrie Quinn, Aliza Pressman, Blair Hammond

PURPOSE: To determine the impact of physical messaging and a 1-hour staff training on staff self-reported behaviors, knowledge and attitudes regarding the promotion of positive parenting behaviors with families.

METHODS: Non-physician staff on Mount Sinai Hospital Postpartum floors were assessed with surveys before and after installing messages throughout the unit that promote positive adult-child interactions and a 1-hour training on the science of early learning and ways to promote positive parenting behaviors. Anonymous surveys were administered on an iPad. Self-reported knowledge and attitudes were measured on a Likert scale, and behaviors were measured on a dichotomous scale. Responses were analyzed using t-tests. The study was deemed exempt by the Icahn School of Medicine IRB.

RESULTS: 75 staff completed the pre-project survey and 77 completed the post survey. There were statistically significant changes in behavior, knowledge and attitudes. Staff reported significant increases in behaviors that promote early learning, including promoting talking out loud about the things they are seeing, hearing, and doing ($p=0.0006$) and discussing with families that the brain grows fastest during the first 5 years of life ($p=0.0348$). Staff knowledge regarding brain growth in the first five of life and the impact of verbal stimulation on brain development increased significantly ($p=0.0090$ and $p=0.0021$, respectively). Staff attitudes regarding the impact staff can have to promote early brain development during typical interactions and their role in encouraging early learning both increased significantly ($p=0.0000$ and $p=0.0068$, respectively). Staff also reported significant increases in confidence, mindset and feasibility with regards to praising parents and caregivers for supporting early learning, demonstrating positive adult-child interactions, and sharing information about early learning and brain development withfamilies.

CONCLUSION: A combination of a 1-hour staff training and installation of physical messaging that prompts brain building interactions in a postpartum unit significantly changed staff reported knowledge, attitudes and behaviors around early learning and promoting positive parenting behaviors. A program that targets all families and recognizes the important role of inter-professional staff interactions to promote brain building in the healthcare space is a novel way to reimagine pediatric healthcare.

ABSTRACT #44

POINT-OF-CARE ULTRASOUND SKILL ACQUISITION AND DECAY CURVES IN ATTENDING PHYSICIANS

AUTHORS: Elizabeth Yetter

PURPOSE: When a medical procedure, skill, or area of knowledge isn't routinely reviewed there's a risk of losing competency. An area commonly practiced and greatly impacting medical care is point-of-care ultrasound (POCUS). POCUS learning curves have been studied in medical students and resident physicians [RPs], but only in a limited fashion in attending-level physicians [ALPs]. Research on POCUS skill decay and when to optimally intervene with re- training is lacking. Our primary hypothesis is that ALPs have significantly different learning curve profiles vs with those characterizing RPs and medical students. Our secondary hypothesis is that skill decay rates of ALPs will vary as a function of frequency of POCUS application over time.

Aim 1: Determine POCUS learning curves for ALPs who were not previously credentialed in an ultrasound modality during residency. We hypothesize that POCUS learning curves differ for ALP vs RP, as their baseline medical knowledge and clinical responsibilities differ.

Aim 2: Establish the average decay rates for ultrasound competency relevant to emergency ultrasound. We hypothesize that ALPs will have diminished competency over time if they don't consistently perform or supervise POCUS.

Aim 3: Determine the frequency of POCUS performance or supervision for ALPs necessary to maintain competency. We hypothesize there's a minimum number of POCUS exams either performed or supervised necessary to maintain competency.

METHODS: AIM 1: Attendings not credentialed in a core POCUS will have a baseline knowledge test, a skills test via Standardized Direct Observation Tool (SDOT), and a survey on previous experience followed by a curriculum similar to that followed by RPs but adjusted to their clinical schedule. After course completion, ultrasounds will be examined in quality analysis (QA) and they will undergo a post-test SDOT.

AIM 2 & 3: Attendings credentialed in a core POCUS exam will undergo an SDOT and knowledge test without prior preparation. Studies performed either by them or while supervising RPs will be reviewed. Results: AIM 1: The number of ultrasounds performed to reach an acceptable level of skill as determined by trained faculty during QA will be examined to determine the number needed to reach competency in addition to a passing score on the post-test SDOT.

AIM 2: Attendings who do not pass the SDOT will have their QA reviewed to determine the last time they performed or supervised the scan in order to extrapolate the average decay rates.

AIM 3: Attendings who pass the SDOT will have their QA reviewed to determine the last time they performed or supervised the scan and the number of those scans performed or supervised in the past two years.

ABSTRACT #44 (CONT)

CONCLUSION: Establishing and maintaining competence is paramount to advancing medical education and promoting patient safety. Continuing medical education would benefit from further research, providing physicians with evidence- based recommendations to maintain competency.

ABSTRACT #45

A COACHING AND APPRECIATION WORKSHOP FOR FACULTY LEADERS TO ENHANCE FACULTY WELL-BEING AND ENGAGEMENT

AUTHORS: Lauren Peccoralo, Carly Kaplan, Lisa Bloom, Brijen Shah, Yaakov Klein, Stephen Fectaeu, Diane Adams, Alyssa Giannandrea, Corinne Johnson, Jonathan Ripp

PURPOSE: Literature suggests that faculty leaders' behavior relates to burnout and engagement of their team. In particular, faculty whose leaders provide coaching and feedback and recognize them for a job well done are less likely to be burnt out, while targeted mentorship and coaching efforts can improve well-being in the workplace.

OBJECTIVES:

- To deliver a coaching and appreciation workshop to high-level faculty leaders
- To improve skills and attitudes of faculty leaders in coaching and appreciation

METHODS: Utilizing literature and our needs assessment (institution-wide faculty survey), we created 2 sessions on coaching and appreciation of team members. Sessions included brief didactics, role play, polling, and group discussion.

Objectives for participants:

- Describe the relationships between burnout, well-being and leadership
- Apply elements of coaching practices (humble inquiry, active listening, GROW model)
- Show value and appreciation to team members using preset cues

We recruited faculty leaders via leadership meetings and personal emails. Our evaluation plan includes surveys administered pre- and post-workshop. The pre-workshop survey assessed attitudes towards and quantity of coaching and appreciation; the immediate post-workshop survey assessed the content and delivery of the sessions. The delayed post-workshop survey will assess changes in behavior in coaching and appreciation. The former 2 surveys have been completed with descriptive data shared here

RESULTS: Of the 88 leaders invited, 62 (70%) attended at least one session and 43 (%) attended all sessions. This included: 23 Chairs, 15 Institute Directors, 6 Hospital CEO's/CMO's. 42/62 (68%) attendees completed the pre- workshop survey. Most felt they were moderately (71%) or extremely skilled (26%) in coaching, with 85% reporting they sometimes or frequently provided coaching to direct reports. Most leaders felt that they show appreciation in various ways "at least some of the time" (91-100%). Barriers to coaching and providing appreciation included: not enough time, too many faculty reports, lack of direct observation and lack of skill. Over 50% of attendees responded to the post-workshop survey. The learners agreed that the workshop increased their knowledge or skills in coaching (92%) and appreciation (96%), and 88% felt that their peers would benefit from these workshops.

ABSTRACT #45 (CONT)

CONCLUSION: We successfully recruited senior leadership to attend innovative workshops focused on coaching and appreciation skills. Although we were limited in participants and a one-time virtual workshop, participants practiced skills and received feedback. Next steps include providing the workshop to other institutional leaders and measuring long-term changes in leadership behavior and faculty well-being.

ABSTRACT #46

THE THRIVE COVID-19 FELLOWSHIP: CREATING A FORUM FOR COLLABORATIVE TEAM SCIENCE AND INNOVATION DEVELOPMENT

AUTHORS: Layla Fattah, Janice Gabrilove, Joseph Borrello, Holly Oemke, Turner Baker, Kevin D. Costa, David Putrino, Anthony Costa

PURPOSE: Launched in October 2020, the Mount Sinai Targeted Healthcare Innovation Fellowship (THRIVE) is a 9-month program for participants from diverse professional backgrounds to form teams to develop a HealthTech innovation related to COVID-19. This innovative program is designed to provide an experiential team science platform for participants to take an idea from concept to commercial viable innovation, whilst developing the skills to work collaboratively in multidisciplinary teams. THIRVE participants are comprised of medical students, graduate students, and trainees (including residents and fellows) from across the Icahn School of Medicine at Mount Sinai.

METHODS: Following a competitive application process, 16 THRIVE fellows were selected to participate in the program. Participants were provided with access to a range of mentors and experts in the field, and encouraged to identify and reach out to these individuals to create their own networks of professional support. Participants self-select into 3 teams and worked collaboratively across Slack and other online platforms. Participants were allocated a $2500 per team and prepared budgets to allocate funds towards hardware, software and input from external consultants to support the development of their innovation. Success of the program will be evaluated by:

-assessing pre- and post- collaborative research orientation among THRIVE fellows using the ROI scale[1]
-using social network analysis (SNA) to investigate the social networks of THRIVE fellows to capture patterns of communication and collaboration related to innovation development
-exploring participant experiences of group formation, teamwork and collaboration related to innovation development using one-to-one semi-structured interview
-determining team success in innovation development, measured by number of publications, funding awarded, provisional patents and viable products.

RESULTS: Paired t-tests will determine whether collaborative orientation of THRIVE fellows changes pre- vs. post- program participation, indicating changes in attitude toward multidisciplinary team work. SNA will be used to describe structural patterns of communication with mentors and experts in the field that occur at individual and group levels.

Network-level indices will provide insight into patterns of communication that exist in innovation development: degree centrality (number of connections per individual), betweenness centrality (number of bridges to others in a network), closeness centrality (closeness to others in a network). We will also test for associations between network characteristics and team success in innovation development.

CONCLUSION: Understanding patterns of formal and informal relationships, interactions, and perceptions of the collaborative process among individuals in THRIVE teams will demonstrate whether such a program can provide an effective forum for team science and innovation development related to COVID-19.

ABSTRACT #47

FILM IN MEDICINE: A CINEMATIC INTRODUCTION TO PSYCHIATRY FOR MEDICAL & GRADUATE STUDENTS

AUTHORS: Esha Bansal, Krishna Patel, Yonis Hassan, Susan Kim, Arifa Zaidi, Timothy Rice

PURPOSE: Among medical and graduate students at the Icahn School of Medicine at Mount Sinai (ISMMS), this study aims to assess the potential role of film viewings and group discussions in: a) enhancing subjective understandings of diverse mental illnesses and the social determinants underlying them; and b) increasing exposure to and interest in careers in psychiatry. Among medical students, the study aims to build appreciation of film as a creative medium to teach and learn medicine, and of how film contributes to developing an identity as a physician.

METHODS: We will conduct a single site, pre-post study at ISMMS in which we will offer an optional nine-week, seminar-style elective course entitled "Film in Medicine" for medical and graduate students. The eligible student body will be invited to the course via email and interested students will register to participate on the institutional course scheduling portal. Quantitative and qualitative data will be collected via the following sources: 1) self-reported data from baseline (pre-course) and final (post-course) surveys; 2) student quotes collected during film discussion sessions; 3) self-reported data from theme-specific questionnaires completed after each discussion session. Each week of "Film in Medicine" will center around a film that addresses a particular realm of psychiatric practice (e.g. psychotherapy, substance abuse disorders, psychotic disorders, mood and anxiety disorders) as well as patients' lived experiences with related mental illnesses. Participants will view the assigned film of the week independently, prior to class sessions. During class sessions (once a week from 3/3/21-4/28/21), participants will engage in critical, open- ended discussion of the film, with current psychiatry residents as facilitators.

RESULTS: We hypothesize that our course will increase medical and graduate students': a) understanding of mental illness and psychiatry; b) comfort level in discussions of mental health topics and patient experiences; and c) interest in careers in psychiatry. Data analysis will be finalized two to three months after course completion. For responses to Likert-scale survey questions, descriptive statistics such as two-sample t-tests of significance will be used to assess the effectiveness of the course. With regards to qualitative feedback, student quotes and responses to class discussion questions will be examined to identify whether consistent themes emerge.

CONCLUSION: We anticipate that the pre-post design of this study will permit identification of the strengths and weaknesses of a film-based course that seeks to increase medical and graduate students' awareness of mental health themes and career interest in psychiatry. This study will evaluate the effectiveness of a holistic, innovative approach to medical and graduate student education in psychiatry.

ABSTRACT #48

OPHTHALMOLOGY EDUCATOR ATTITUDES TOWARDS GENDER-SPECIFIC MENTORSHIP

AUTHORS: Megan E. Paul, Monica Dweck, Nisha Chadha

PURPOSE: Numerous studies have emphasized the influence of gender-specific role models and mentors in medical students' career decisions. Though some research exists on the impact of female mentorship in trainee career trajectories, this has not been explored fully in ophthalmology. Therefore, the purpose of this study was to evaluate the impact of ophthalmology mentorship on medical students' decisions to enter this field. More specifically, we evaluated the Association of University Professors of Ophthalmology (AUPO) member attitudes towards gender-specific mentorship, as a group frequently involved in mentoring students.

METHODS: A 22-question survey was sent to all AUPO Department Chairs, Residency Program Directors, and Medical Student Educators. Survey questions inquired about attitudes towards mentorship and current mentorship experiences using Likert scale and free response questions. Additionally, the gender breakdown of current AUPO members was determined through a review of the AUPO membership directory. Student's t-tests were used to evaluate quantitative information while chi square analysis was used to evaluate qualitative information, all at a threshold significance level of $p<0.05$.

RESULTS:
75 members responded (23.7% of total), including 17 of 135 Chairs (12.6%), 34 of 114 PDs (29.8%), and 30 of 72 MSEs (41.7%). Of current AUPO members, 85.2% of Chairs, 67.5% of Program Directors, and 43% of MSEs are male. Of respondents, 55.4% identified as female and 44.6% as male.

Male members indicating having approximately 47.9% female mentees vs. 47.6% for female members, ($p=0.451$). However, 21.2% of male and 56.1% of female members agreed that a mentee of the same gender was important, ($p<0.01$). Furthermore, 13 of 40 female members (32.5%) reported having a significant female mentor themselves compared to 1 of 29 male members (3%), $p<0.05$.

Women were more likely to agree that they would prefer to mentor a medical student of the same gender in ophthalmology compared to men, with average Likert scale scores of 2 and 1.67, respectively. Additionally, female members on average reported mentoring 5.27 students per year in ophthalmology vs. 4.26 students for men.

CONCLUSION: Male and female AUPO members reported no difference in the ratio of female mentees. However, female members were more likely to feel gender-specific mentorship was important, with one-third also reporting having a significant female mentor themself. These trends suggest that gender-specific mentorship occurs within ophthalmology. This, in turn, can promote equity in training and education for students interested in ophthalmology and potentially assist with recruitment of a diverse group of students to the field.


ROBERT J. DESNICK, MD, PHD
BRIAN D. BROWN, PHD
YIANNIS A. IOANNOU, PHD
NINA BHARDWAJ, MD, PHD
PRITI BALCHANDANI, PHD
ANGELA DIAZ, MD, PHD
DIANE E. MEIER, MD
ADOLFO GARCIA-SASTRE, PHD
PETER PALESE, PHD
DOCTOR

SECTION 7:

Quality Improvement

POSTERS 49-59

ABSTRACT #49

ADVANCE CARE PLANNING IN POST-ACUTE REHAB - A QUALITY IMPROVEMENT STUDY

AUTHORS: Caitlyn Kuwata, Kayleigh Sullivan, Rosmy Jimmy, AS Rivero-Gutierrez, Stephanie Le, Ruth Spinner

PURPOSE: Post-acute rehab (PAR) patients are often medically fragile and at risk for decompensation. Many patients use the PAR benefit during the last year of life, and a significant number of seriously ill patients die in PAR, suggesting urgent need for advance care planning (ACP) in this setting.[1,2] However, evidence is lacking on the value and prevalence of ACP for this population. This study aims to increase ACP in a PAR population by using QI strategies to improve the existing palliative care (PC) referral process.

METHODS: The study was conducted at a community skilled nursing facility (SNF) with 164 PAR beds. Electronic medical records for 34 recently admitted PAR patients were reviewed to quantify ACP prevalence. This facility has a PC screening tool as part of the admission process. We focused on the referral process to palliative care as it was the most modifiable component with the most potential to increase ACP completion. The first PDSA cycle focused on improving the rate of PC referrals for admissions who screened positive. Referrals were tracked with reminders to providers if referrals were not completed.

RESULTS: At baseline, 23% of admissions had a Medical Order for Life Sustaining Treatment (MOLST) and 12% had a health care proxy. The palliative care screening tool identified 6 patients for referral to PC, but 0% of referrals were completed. After the PDSA was implemented 100% (9 of 9) of PC were completed. Secondary outcomes showed that the palliative care referral led to additional ACP in 3/9 of the patients.

CONCLUSION: This QI initiative increased the PC referral rate for PAR patients with identified PC needs. The low number of patients identified by the PC tool suggest that the tool is not sensitive enough. Future PDSAs will focus revising the screening tool to more accurately identify those who would benefit from specialty PC, with the goal of developing a more reliable PC screening tool for PAR settings.

1. Flint D. Rehabbed to Death. The New England journal of medicine. 2019;380(5):408-409. doi:10.1056/NEJMp1809354
2. Marks AMD, Walton LMD. Palliative Care Consultation in the Sub-Acute Rehab Setting: Results of a Pilot Program (S763). Journal of pain and symptom management. 2016;53(2):444-445.

ABSTRACT #50

USE OF OFF-LABEL MEDICATIONS AND CLINICIAN UNCERTAINTY DURING THE COVID-19 PANDEMIC

AUTHORS: Melissa Hill, Nikhil Shamapant, Surafel Tsega, Max Mandelbaum, Michael Herscher

PURPOSE: This study aimed to evaluate provider attitudes regarding prescribing medications off-label for the treatment of COVID-19.

METHODS: This was an online survey sent to frontline providers within a large urban health system in New York City.

The survey assessed clinician attitudes regarding off-label prescribing on a four-point forced-choice Likert scale. Providers were eligible if they staffed inpatient medicine wards or the ICU between March 1st and May 11th 2020 in the initial stages of the COVID-19 pandemic. Respondents completed the survey on RedCap, a secure survey and database system, prior to June 8, 2020. Descriptive statistics were used to characterize the data.

RESULTS: A total of 242 providers responded to the survey. More than three-quarters (78.4%) of providers report feeling uncertain that the benefits of off-label prescribing for COVID-19 outweigh the risks. Nearly all providers agree that their decisions to prescribe drugs off-label for COVID-19 have been influenced by the practice patterns of peer providers (96.3%) and should reflect clinical severity (90.9%) and medication supply constraints (88.4%). Most clinicians (88.8%) agree or strongly agree that institutional guidelines make them feel more comfortable when prescribing drugs off-label for COVID-19.

CONCLUSION: This study suggests that providers feel uncertain about the practice of off-label prescribing during COVID-19. Providers are relying upon peers for guidance and looking to institutional guidelines for support. We assert that institutional guidelines reflecting available evidence and expert opinion may significantly reduce the burden of decision-making placed on clinicians and thus should be a priority for institutional leadership during this rapidly evolving crisis.

ABSTRACT #51

DO WE REALLY NEED THOSE LABS: A STUDENT-LED INVESTIGATION OF CROSS-DISCIPLINARY ATTITUDES ON DAILY LAB ORDERING IN ACADEMIC INPATIENT MEDICINE

AUTHORS: Brandon Yeshoua, Jonathan Dullea, Joo Yeon Shin, Oluremi Konigbagbe, Victoria Staltare, Chip Bowman, Anne Linker, Surafel Tsega, Manan Shah

PURPOSE: Over-ordering of daily labs adversely affects patient care through hospital-acquired anemia, patient discomfort, frontline staff burden, and unnecessary downstream testing resulting in the delivery of low-value care. Routine ordering of unnecessary tests occurs for many reasons and can additionally increase cost of care. At our center, previous interventions have targeted lab ordering, but these interventions have not resulted in sustained behavior change. We conducted a student-led study as part of a high-value care curriculum, with the goal of understanding current state practices and local culture to inform future quality improvement interventions to target over-ordering of daily labs.

METHODS: We employed mixed methods to assess lab ordering behaviors and attitudes at an urban quaternary academic medical center. Electronic medical record (EMR) data was gathered to assess the number of daily labs (BMP, CMP, and CBC) ordered on a general medicine unit from June-October 2020. We surveyed internal medicine (IM) attendings, residents, physician assistants (PA), nurse practitioners (NP), registered nurses (RN), and patient care associates (PCA) to understand cross-professional beliefs and attitudes about daily lab testing.

RESULTS: An average of 2.2 labs were collected per patient day. This was an increase from the 1.3 labs per patient day found in a similar patient population from March 2016 to August 2017 after the last daily lab reduction intervention. A widely distributed survey yielded 127 frontline staff responses: 29 (22.8%) attending physicians, 43 (33.9%) resident physicians and fellows, 12 (9.4%) PAs, 10 (7.9%) NPs, 14 (11.0%) RNs, and 19 (15%) PCAs. Of the 94 ordering providers (MD, DO, PA, NP), 73% thought they were unnecessary. No attending physicians designated daily lab testing as necessary, in contrast to 10% of NPs, 33% of PAs and 25% of residents. Only 29% of ordering providers agreed that daily testing improved patient care and safety; moreover, 89% believe it has potential harms. Of the residents, NP, and PAs, 68% cited worry over attending reaction and 97% cited training/habit as a reason for ordering unnecessary labs.

CONCLUSION: Analysis of prior interventions aimed at reducing daily lab testing demonstrates a clear need for sustainable interventions to improve patient care and reduce costs. Our multidisciplinary survey highlights a major discrepancy between attendings and other ordering providers on the necessity of daily tests. These results reveal the potential impact of planned PDSA (plan-do-study-act) cycle interventions including planned educational sessions, the initiation of monthly audit and feedback email, and attending-led rounding discussions on necessary labs.

ABSTRACT #52

ALL WE CAN BE: MILITARY VETERANS AND DIVERSITY IN MEDICAL SCHOOL ADMISSIONS

AUTHORS: Christopher Bellaire, Thomas Fetherston, Jacquelyn Chudow, Jessica Maysonet, Jacob M. Appel, Valerie Parkas

PURPOSE: Medical schools are increasingly identifying military veteran applicants as a source of diversity, resiliency and commitment—often derived from their personal experiences in the military. Unfortunately, veterans remain significantly under-represented in entering classes; moreover, those veterans who do matriculate are not yet fully reflective of the diversity that the Armed Forces have to offer. Fortunately, specific measures can be implemented to increase both the number and diversity of student veterans in medical school.

METHODS: The authors reviewed US medical schools' veteran initiatives, common barriers faced by veterans, and best practices for medical schools to recruit and sustain them. The authors searched the academic literature using keywords related to military veterans and admissions, citing data from the Department of Veterans Affairs and its National Center for Veterans Analysis and Statistics, the Association of American Medical Colleges, and the US Census Bureau.

RESULTS: Of the 21,869 matriculants to US medical schools in 2019, only 131 (0.6%) reported having served in the military. Of those chosen few, 77 students entered the Uniformed Services University of the Health Sciences to pursue careers in military medicine. As a result, fewer than 100 military veterans entered civilian medical education institutions in 2019.

CONCLUSION: Medical schools offer few pathways to entry for military servicemembers—and far fewer for enlisted personnel and other populations traditionally under-represented in medicine. Should schools aim to recruit a veteran population that is truly representative of the military, additional measures need to be taken into consideration during the admissions review process.

ABSTRACT #53

GERIATRIC SPECIFIC INPATIENT DIABETES MANAGEMENT: THE EFFECT OF AN EDUCATION INTERVENTION ON HEALTHCARE PROVIDERS' KNOWLEDGE LEVEL

AUTHORS: Francisco Diaz

PURPOSE: Although Morningside Hospital has a strong geriatric component care in its organizational plan for healthcare delivery, as evidenced by its Age-Friendly Healthsystem designation, its educational program for the medical staff lacks content on the management of older adults with diabetes mellitus. This project seeks to address this gap in geriatric care of the facility with the incorporation of an educational program directed to health care professionals directly responsible of directing patient care. The module "Finding the Sweet Spot, FFS," was developed by pharmacists and the geriatrician team of the Veterans Affairs Boston and members of the Geriatric Research Education and Clinical Center. FFS presents an approach on the management of diabetes mellitus in older adults based on the principles from the American Diabetes Association (ADA) and the American Geriatrics Society (AGS).

METHODS: A case-based educational intervention with a pretest and posttest comparison evaluation process will be performed with a convenience sample of medical staff attending educational activities sponsored by the Endocrinology Department. The learners will include advanced-practice nurses, physician assistants, residents, and attending physicians. The educational intervention presents the American Diabetes Association and the American Geriatrics Society combined guidelines for managing older adults with diabetes. The knowledge will be evaluated with ten multiple-choice questions reflecting the learning objectives. A paired t-test will be utilized to assess the differences between pretest and posttest scores. The level of significance will be set at = 0.5.

RESULTS: The results indicated that educational presentation significantly improved the knowledge by increasing the percentage of corrected answer from pretest ($M = 56.00$, $SD = 14.65$) to posttest ($M = 80.00$, $SD = 18.64$), $t = -4.755$, $p < .001$.

Due to the very small sample size, Mann-Whitney nonparametric analyses were used to compare percentage of corrected answers between NP and non-NP at pretest and posttest on diabetes and frailty questions.

CONCLUSION: The rising population of older adults requires a healthcare professionals educated and interested in knowledge on geriatric aspects of medical care. The use of case studies and illustrative teaching methods have been traditionally used and evaluated as tools to maximize the retention of content and comprehension of complex clinical issues. This educational program is practical and may be easily implemented to a broad range of healthcare professionals that care for older adults with diabetes regardless of the specialties.

ABSTRACT #54

IMPROVING HEALTH CARE VALUE WITH THE SOFI PROJECT: STANDARDIZATION OF IV FLUIDS IN INPATIENT SETTINGS

AUTHORS: Sri Lalitha Garimella, Sireesha Aleti, Hina Fatima, Aishwarya Palorath, Kristen Roy, Lenny Shats, Kelly Reinhold, Jean Gordon, Joann Stuart, Ellen Heinrich, Jiliu Xu, Teresa Lemma, Kevin McDonough, Melissa Grageda

PURPOSE: In 2018, the American Academy of Pediatrics (AAP) published guidelines on maintenance IV fluids (IVF) in pediatric patients, recommending isotonic (instead of hypotonic) fluid use to significantly decrease the risk of developing hyponatremia. Our quality improvement (QI) team sought to improve and sustain the exclusive use of isotonic maintenance IVF in our inpatient pediatric unit, and joined a national QI collaborative. The aims were to increase the proportion of hospital days with exclusive isotonic maintenance IVF use to ≥ 80%, to decrease the number of routine labs per hospital day by 20% from baseline, and to decrease the proportion of time (hours) on maintenance IVF during hospitalization by 10% from baseline by May 2020.

METHODS: The project took place at the inpatient pediatric unit of an academic community hospital. Champions from the departments of pharmacy, nursing, emergency medicine and pediatrics led the QI initiative. Each champion educated their staff about the updated guidelines, ongoing project and interventions. The study occurred over 14 months (April 2019-May 2020). Monthly data was collected. Outcome measures included tonicity of maintenance IVF, number of serum WBC levels (proxy for routine labs), and duration of maintenance IVF. Process measures were daily weight measurements while on IVF. Balancing measures included floor-to-PICU transfers, serum Na levels, adverse events, and length of stay. The model for improvement and serial PDSA cycles were utilized to test changes throughout the study.

RESULTS: There were 314 patients (baseline: cycles 1-20, n=242; action period: cycles 21-25, n=72). There was improved exclusive isotonic fluid use over time, and 98% compliance during the action period. There was an 18% decrease in the number of routine labs per hospital day. There was no significant change in adverse events, floor to PICU transfers and hospital length of stay.

CONCLUSION: Participation in a national QI collaborative and interdepartmental collaboration were associated with improved health care value in the inpatient pediatric setting, as demonstrated by sustained use of maintenance fluid that is safer for the patient (isotonic vs hypotonic) and reduced number of “routine” blood draws.

ABSTRACT #55

TRAINING 2ND YEAR FELLOWS AS QUALITY IMPROVEMENT (QI) MENTORS FOR A GERIATRICS AND PALLIATIVE FACULTY AND FELLOW QI CURRICULUM

AUTHORS: Shivani Chopra, Stephanie Chow, Brijen Shah, William Hung, Helen Fernandez, Christine Chang

PURPOSE: The Accreditation Council for Graduate Medical Education requires that fellows receive QI training. Feedback from the 2019-20 QI curriculum cohort indicated 46% of fellows and 62% of faculty mentors reported low fellow interest in the QI project topic as a barrier to project completion. Suggestion was made to have 2nd year fellows "pitch" QI ideas and be main project mentors. Project aims: (1) train 2nd year fellows to lead QI projects; (2) evaluate efficacy of mentor training for 2nd year fellows.

METHODS: Mentor development consisted of asynchronous web-based training on QI principles, with coaching during a faculty-fellow "co-learning" QI curriculum. Seven 2nd year fellows pitched five QI project ideas to 16 1st year fellows for ranking; teams were created based on order of preference.

2nd year fellows were evaluated as QI mentors using a prospective survey of knowledge and baseline comfort with QI concepts on a Likert Scale (i.e. 5=Very comfortable, 1=Very uncomfortable). A midterm survey of all fellows and faculty assessed efficacy of mentor training and 2nd year fellows' attitudes on the junior mentor role.

RESULTS: 94% of 1st year fellows, 83% of 2nd year fellows, and 90% of faculty mentors completed pre-curriculum surveys. 50% of 1st year fellows, 83% of 2nd year fellows and 80% of faculty mentors completed midterm surveys. Midterm results revealed faculty mentors (avg score 4.78) and 1st year fellows (avg score 4) felt that 2nd years were helpful as mentors. 2nd years reported improved comfort as mentors (Pre 2.8; Post 3.6). At four months, 1st year fellows' comfort utilizing four key QI concepts increased. Midterm surveys revealed that 2nd year fellows preferred their mentor role, but wanted clearer definition of the role. Faculty mentors (avg score 4.44) and 1st year fellows (avg score 3.75) agreed that 2nd years helped overcome QI project barriers. Faculty mentors reported fellow involvement improved over the prior year, although inequity persisted in participation by 1st year fellows.

CONCLUSION: Training 2nd year fellows as QI mentors can improve fellows' comfort and engagement with QI concepts. Next steps include defining roles of all QI group members and determining how to further enhance equitable fellow participation.

ABSTRACT #56

HALTED BY COVID: PANDEMIC IMPACT ON QUALITY IMPROVEMENT LEARNING FOR GERIATRIC AND PALLIATIVE MEDICINE FELLOWS

AUTHORS: Christine Chang, Shivani Chopra, William Hung, Brijen Shah, Helen Fernandez

PURPOSE: The ACGME requires that fellows receive QI training. A nine-month QI curriculum for the 2019-2020 Geriatric and Palliative Medicine fellowship at a large NYC hospital was prematurely halted by the pandemic. We aim to assess the effect of the pandemic on our QI curriculum.

METHODS: The QI curriculum employed a "flipped" classroom model using Institute for Healthcare Improvement online modules to teach basic QI concepts and four protected 1-2 hour sessions to reinforce knowledge application of QI concepts through active learning methods. Fellow's QI roadmap with resources, accountability contracts, and presentation templates were created to guide project workflow. Fellows worked on departmental prioritized team- based QI projects, scheduled for presentation at midterm and end-of-year. Program evaluation consisted of a prospective pre-post survey with demographics; 6-item questionnaire on comfort with QI concepts with Likert Scale (5=Very Comfortable, 1=Very Uncomfortable); 3 cases from the Quality Improvement Knowledge Application Tool (QIKAT); and a 2 question open ended course evaluation (What are the strength and weaknesses of this course? Do you have any recommendations to improve this course?)

RESULTS: 35 geriatric and palliative medicine fellows worked on 8 departmental quality initiatives. But during the pandemic surge, all projects were halted due to learner stress, redeployment and time management issues. Despite these significant barriers, 100% of QI teams submitted abstract proposals with 75% acceptance for national and regional presentations. 80% of fellows completed PRE and POST surveys. Post curriculum, 1st year fellows demonstrated improved comfort with utilizing the 4 QI concept/tools ($p<0.05$) and improved QI knowledge via QIKAT (PRE 20.7; POST 23 Paired t test $p < 0.01$). Course evaluations were positive with recommendations to include more protected work time with QI concept refreshers, education on data collection and analysis, stronger faculty facilitation, and advice to improve equitable group participation.

CONCLUSION: Even during a pandemic, a structured QI curriculum that employs a flipped classroom and engages fellows on prioritized departmental QI projects was proven an effective method for teaching quality improvement skills to fellows.

ABSTRACT #57

A MODEL TO INCREASE FACULTY COMPETENCY IN TEACHING QI TO GERIATRIC AND PALLIATIVE CARE FELLOWS

AUTHORS: Christine Chang, Shivani Chopra, William Hung, Brijen Shah, Helen Fernandez, Kelly Cummings

PURPOSE: A major barrier to the expansion of Quality Improvement (QI) and Patient Safety (PS) in medical education has been the lack of faculty development (FD) in quality and safety. Our geriatric and palliative medicine fellows participate in a 9-month project-based QI curriculum coached by volunteer faculty. Year 6 survey of faculty coaches revealed 43% never completed formal QI curriculum, 43% felt very comfortable being a QI mentor, and 86% would welcome further QI FD. Our project aims to improve faculty QI knowledge and teaching skills to increase trainees' engagement in QI/PS.

METHODS: 8 QI projects with 16 coaches were offered to 35 fellows to rank. All faculty coaches participated in the QI FD curriculum that included a web-based training to teach QI principles and the Train-the-Trainer Model to coach faculty on teaching and facilitating QI team projects during faculty-fellow "co-learning" QI curriculum. A mid-year "check-in" with faculty explored team project challenges.

Evaluation consisted of a prospective pre-post survey with demographics; 6-item questionnaire on comfort with QI concepts on a Likert Scale (5=Very Comfortable, 1=Very Uncomfortable); 3 cases from the Quality Improvement Knowledge Application Tool (QIKAT); and 2 question open-ended course evaluation for faculty and fellows.

RESULTS: 56% were 1st time coaches. 43% had no prior QI training. Only 8% felt very comfortable while 46% felt neutral or uncomfortable being a QI mentor. 87% completed both pre- and post- surveys. Post curriculum, 1st year coaches demonstrated improved comfort in being a mentor and utilizing 4 key QI tools ($p<0.05$) as well as improved QI knowledge (pre 22.6; post 24.5 $p<0.05$). Similarly, 1st year fellows demonstrated improved comfort with 4 key QI concept/tools ($p<0.05$) and improved QI knowledge (pre 20.7; post 23.0 $p< 0.05$). Fellows' course evaluations were positive with recommendations to include more protected time, stronger faculty facilitation, and more equitable group participation.

CONCLUSION: Use of asynchronous web-based training with the Train-the-Trainer Model to coach faculty on how to teach and facilitate the QI team projects is an effective method to improve faculty comfort and competency in teaching QI skills to fellows.

ABSTRACT #58

DEVELOPMENT AND VALIDATION OF A QUALITY IMPROVEMENT TOOL FOR DOCUMENTATION AND CLINICAL CARE

AUTHORS: Eric Legome, Heidi Baer, Daniel Satnick, Joshua McHugh

PURPOSE: Poor documentation, such as provider discrepancies, missing medical decision making, lack of progress notes and unprofessional observations, as well as inappropriate care, can negatively impact medical malpractice claims. Formal processes of quality documentation in emergency medicine are not well studied. We introduced a new quality improvement (QI) process use focused on improved clinical charting and reduced deviations from standards of care in the Emergency Department. We hypothesized that an explicit simple QI scoring rubric, consistently applied, would demonstrate inter-rater reliability among attending physicians and provide a standardized tool for departmental review.

METHODS: We modified a previously developed template that demonstrated high inter-rater reliability, but had a complex and extensive process, for more streamlined and widespread applicability. We developed a new system using two discrete templates, documentation and clinical care, and limited choices to 5 options focusing on whether the chart was defensible if there was a poor outcome and if the medical care and resource utilization fit accepted standards. Each sheet had a companion sheet with basic examples of the scoring. A ten-minute group orientation was provided prior to individuals performing the reviews. Eight emergency physicians with quality improvement experience evaluated the same 10 pre-selected charts, with a mix of previously noted charting appropriateness, using our predefined scoring rubrics and recorded the results in an online secure database. Consistency among raters was assessed using the Shrout-Fleiss relative: fixed set mean kappa scores.

RESULTS: The Shrout-Fleiss relative: fixed set mean kappa scores indicated excellent consistency among raters for both the documentation ($k = 0.910$) and clinical care ($k = 0.836$) scoring tools.

CONCLUSION: A modified, simplified QI scoring rubric demonstrates inter-rater reliability among experienced attending physicians and may be used as a standardized tool for QI chart review. Next steps will focus on improving both charting and clinical care by integrating all attendings in standardized peer review using this tool. By requiring all the attending staff to review a peers' charts using this template we believe they will have a better understanding of the elements of a "good" chart as well as opportunities for improved care and resource utilization.

ABSTRACT #59

ASSESSING THE CLINICAL UTILITY OF TRANSCRANIAL MAGNETIC STIMULATION AMONG UNDERSERVED POPULATIONS AT A CITY HOSPITAL IN QUEENS, NEW YORK

AUTHORS: Dhruv Gupta

PURPOSE: Background: Up to 40% of individuals suffering from depression do not recover from psychotropicmedication trials and psychotherapy [1]. Transcranial Magnetic Stimulation (TMS) is a novel, non-invasive therapeutic modality emerging for treatment resistant depression (TRD). Our institution, Health + Hospitals, Elmhurst (Elmhurst), a city hospital in Queens, New York, serves individuals largely from underserved minorities and low socio-economic backgrounds. This population tends to have lower rates of insurance coverage (e.g., of those individuals diagnosed with Major Depressive Disorder (MDD) in our outpatient clinic, 27% are uninsured and only 8% have commercial insurance) and adequate access to mental health care, decreasing their ability to access novel therapeutic modalities like TMS [2].

OBJECTIVE: To assess the clinical utility of TMS within the patient population at Elmhurst, and its overarching implications for better serving city hospital patient populations broadly.

METHODS: Methods: An 11-item web-based survey asked attending and resident psychiatrists across inpatient and outpatient settings at Elmhurst to assess the clinical utility of TMS within their caseloads. Specifically, it looked at three overarching domains assessing the number of individuals: 1. with a diagnosis of MDD; 2. who failed two or more antidepressant trials; and 3. who would benefit from neuromodulation therapy (i.e., TMS or ECT).

RESULTS: Results: The survey was distributed to 7 inpatient attendings (100% response rate) and 32 outpatient providers (53% response rate). Results indicated that 25.6% of individuals within the inpatient setting and 45.9% in the outpatient setting carried a diagnosis of MDD. Within this population, 41.6% (inpatient) and 28.1% (outpatient) individuals failed two or more antidepressant trials. Of these individuals, providers recommended 71.7% (inpatient) and 46.9% (outpatient) for TMS or ECT. Within the two alternatives, there was a strong preference for TMS, with practitioners being almost twice as likely to recommend TMS over ECT in the inpatient setting and four times in the outpatient setting.

CONCLUSION: Conclusion: Our results suggest that TMS would be clinically beneficial to implement at Elmhurst. Given that more than a quarter of individuals diagnosed with MDD failed two or more antidepressant trials, the need for access to alternate treatment modalities is essential. The availability of this service will provide our population with a treatment for MDD that they cannot afford otherwise. Furthermore, various psychosocial factors (e.g., no prior preparation, immediate recovery, and shorter procedure times, amongst others) make TMS a superior treatment modality for our patient population compared to ECT [3]. We hope to be the first city hospital in New York to have a TMS program, and strive to become a model and advocate for others to set up similar services to improve mental health care measures for underserved populations throughout the five boroughs of New York.


EMMA GUTTMAN-YASSKY, MD, PHD
ROBERT J. DESNICK, MD, PHD
LYNNE D. RICHARDSON, MD
BRIAN D. BROWN, PHD
JOSEPH D. BUXBAUM, PHD
YIANNIS A. IOANNOU, PHD
HELEN S. MAYBERG, MD
NINA BHARDWAJ, MD, PHD
DOCTOR

SECTION 8:

Simulation

POSTERS 60-68

ABSTRACT #60

USE OF SIMULATION AS AN ORIENTATION FOR OFF-SERVICE RESIDENTS IN THE EMERGENCY DEPARTMENT

AUTHORS: Daniel Satnick, Heidi Baer, Joshua McHugh, Yasamin Soltanianzadeh, Steven J. Bolger, Catrina Cropano, Vikas Goswamy

PURPOSE: The Emergency Department can be a difficult practice environment for new providers. We developed two simulation cases for rotating off-service residents as part of their orientation to the Emergency Department. These residents normally work the fields of Internal Medicine, Anesthesia, and Obstetrics & Gynecology. The broad goals of the curriculum were to empower residents to feel comfortable in a new and potentially confusing clinical space.

Specific goals of the simulation were consistent with core goals of Emergency Medicine practice.

METHODS: The simulation department developed and executed two simulations that take place each month during the orientation time for off-service residents. To begin the simulation, off-service residents are instructed to go interview and examine a simulated patient, played by a live actor. Off-service residents are then instructed to present the case to a senior Emergency Medicine Resident, discuss the case with them and develop a plan. They are subsequently asked to interpret clinical information and disposition the patient. After each case there is a debrief with the off-service residents.

RESULTS: The off-service residents stated that they found the simulations very helpful in reinforcing general principles and practice in the Emergency Department. Repeated learning points that were cited included considering a broad differential and dangerous diagnoses, communicating with nursing staff, effectively communicating with consultants, and updating the patient on next steps in their care.

CONCLUSION: Simulation is an effective orientation tool to teach off-service residents general principles of Emergency Medicine Practice.

ABSTRACT #61

COVID-19 RESURGENCE MASS CASUALTY INCIDENT SIMULATION

AUTHORS: Steven J. Bolger, Daniel Weinick, Yasamin Soltanianzadeh, Heidi Baer, Joshua McHugh, Daniel Satnick, Edmund Hsu

PURPOSE: As part of orientation for the incoming emergency medicine interns, the Divisions of Simulation and EMS and Disaster Preparedness collaborated to teach basic principles of emergency preparedness through an in-situ simulation of a mass casualty incident (MCI) related to COVID-19 resurgence in New York City. The objective of this MCI simulation was to provide an opportunity for the interns to learn the principles of disaster preparedness through a simulated MCI case using the resources available in the Emergency Department at Mount Sinai West.

METHODS: The incoming emergency medicine interns were introduced to MCI operations through a morning didactic session hosted by the EMS and Disaster Preparedness Division. This session included a discussion of the varying MCI levels and principles of adapting to a new triage system and delegating tasks. The interns then participated in two focused in-situ MCI simulation sessions in the context of a resurgence of patients with respiratory distress secondary to COVID-19. The scenarios involved a nursing home alerting the emergency department to a large number of residents with signs of respiratory distress.

An anonymous 10-question survey was then distributed to the interns to collect data regarding performance during the first and second simulation sessions. We used a Likert scale from 1 (needs improvement) to 5 (exceeds expectation) to assess communication between providers, how appropriately patients were triaged and dispositioned, and how appropriately patients with respiratory distress were acutely managed.

RESULTS: We found an increase in the numeric rating of communication between providers comparing the first and second simulation sessions from 3.3 to 4.3. We similarly found an increase in the numeric scale regarding how appropriately patients were triaged between low acuity non-isolation, high acuity non-isolation, low acuity isolation, and high acuity isolation between the first and second simulation sessions from 3.6 to 4.0. We also found an increase regarding how appropriately patients were dispositioned between the first and second cases from 3.6 to 4.1. We did not find a numeric difference in how appropriately the patients with respiratory distress were intervened upon with critical actions. We also found that 12 patients were triaged in the first simulation session compared to 14 in the second simulation session which is likely due to a more organized and systematic MCI response.

CONCLUSION: We created a brief learning session followed by an in-situ simulation of an MCI involving COVID-19 resurgence with an objective of allowing interns to understand basic MCI principles and use their newfound knowledge to implement existing MCI protocols and develop an organized response. Overall, we found that in-situ simulation is an effective method of allowing interns to improve communication skills and appropriately triage and disposition patients during an MCI.

ABSTRACT #62

VIRTUAL MASS-CASUALTY INCIDENT SIMULATION

AUTHORS: Steven J. Bolger, Yasamin Soltanianzadeh, Heidi Baer, Joshua McHugh, Daniel Satnick, Sage Wexner, Julie Sayegh, Nubaha Elahi

PURPOSE: Adapting simulation-based curriculum for medical education to the virtual realm presents a unique challenge for educators. We created a virtual simulation of a mass-casualty incident (MCI) in which learners navigate through multiple cases using a track board which they control.

METHODS: We created a novel virtual MCI simulation in which patients are displayed on a track board allowing the learners to simultaneously manage multiple patients. The scenario involved a local fire and a bus crash in which 6 patients are transported by EMS and 3 patients walk into the hospital. The learners had 8 minutes to simultaneously manage the 9 patients with access to unlimited nursing support and any consultant. The track board provided the patients' age, gender, chief complaint, vital signs, and a picture of any pertinent injury or physical examination finding. The learners were provided with history and physical examination information by asking questions to the examiners following the ABEM Oral Certification Examination format. We provided the learners with prompts including any significant changes in vital signs or changes in respiratory status for the patients.

RESULTS: We had multiple groups of 4-5 emergency medicine resident physicians complete the virtual MCI simulation. We observed variation in the approach of different groups of learners ranging from rapidly evaluating all 9 patients and appropriately triaging care to sequentially navigating between patients. Some teams prioritized dispositioning patients quickly while other teams prioritized resource allocation.

CONCLUSION: We created a novel model for simulating a MCI virtually using a track board which learners can use to navigate through multiple cases. We have applied this model to multiple groups of emergency medicine resident physicians for medical education.

ABSTRACT #63

BRACHIAL PLEXUS FORCES GENERATED DURING RESIDENT SIMULATIONS OF OPERATIVE VAGINAL DELIVERIES

AUTHORS: G A. Trivette, Frederick Friedman, Ceyda Oner

PURPOSE: Due to the declining usage of forceps and vacuums in assisting vaginal deliveries, many centers have resorted to simulations to train their housestaff. We previously described the success of a didactic program for simulating operative vaginal deliveries. We now report on the recorded pressures on the brachial plexus during forceps-assisted vaginal deliveries (FAVDs) as compared to vacuum-assisted vaginal deliveries (VAVDs) using a mannequin.

METHODS: This study was approved by the Mount Sinai Institutional Review Board with a waiver of consent. The residents in an academic Obstetrics and Gynecology program were recruited for participation. Baseline survey data including year of training, demographics, and prior experience with operative vaginal deliveries (OVDs). Following an educational session reviewing appropriate usage and techniques, a hands-on practical was conducted using a pelvic model whose matching baby contained a force monitor in its neck. Forces generated during the simulated deliveries were recorded.

RESULTS: A total of 22 residents completed the study. During this study, 20 of the 22 residents exerted more force on the baby mannequin's neck during VAVDs as compared to FAVDs ($P<.001$). Whether evaluated by year of residency training or reported experience, there appeared to be greater forces exerted during VAVDs than with FAVDs.

CONCLUSION: During this educational study, the forces exerted on a baby mannequin's neck were greater during VAVDs than they were during FAVDs. Whether this is an artifact of the study or similar to in vivo results was not tested. Additional studies are currently underway.

ABSTRACT #64

A COST-EFFECTIVE, REUSABLE PERICARDIOCENTESIS SIMULATION MODEL WITH AN INTERCHANGEABLE MODEL HEART AND CHEST WALL

AUTHORS: Rishi Malik, Edmund Hsu, Daniel Weinick, Yasamin Soltanianzadeh, Steven Bolger, Heidi Baer, Joshua McHugh, Daniel Satnick

PURPOSE: Given the exorbitant cost of pericardiocentesis task trainers, there has been a push to develop "Do It Yourself" models. Currently a cost effective, gelatin model exists but is limited in its reusability. We propose a novel "removable lid" ultrasound guided pericardiocentesis model that remains cost effective, sustainable, and educational.

METHODS: 43 emergency medicine residents from Mount Sinai Morningside and West in New York City participated in the study. Residents were randomly divided into either the control group (Group A) that used the EMDAILY model or the interventional group (Group B) that used our novel removable lid model. Each group consisted of 4-5 residents that rotated through the station for 30 minutes at a time. The study began with a 10 minute didactic session led by a faculty member. They were then given 20 minutes to practice their pericardiocentesis skills on either the original model or the interventional model. The residents were given a pre and post-session survey to assess their knowledge on pericardiocentesis. The day after the practice session, a second survey was sent to assess if the residents had enough time with the model. This was to ensure the changing of the lids and balloons did not take away a significant time from the training. In addition, the faculty team leaders of each group recorded the number of models, number of balloons, number of lids used for their respective groups to evaluate the sustainability of the different models.
Descriptive statistics were used to report the data.

RESULTS: Group A, had 3 control models that became unusable after a single needle insertion. They switched to the novel model in order to still have the opportunity to learn and practice the pericardiocentesis techniques. They used a total of 4 removal balloons and 2 removable lids. Group B used a total of 3 balloons and 2 lids. 13 residents responded to the post-survey question asking if they felt they had enough time with the models. 92% responded yes they had enough time. The cost for the EMDAILY model and the novel model were $20. Each model took two hours to make. From the educational assessment pre and post survey, we found there was an increase in number of correctly answered questions about pericardiocentesis.

CONCLUSION: The study demonstrates that our novel low-cost, time efficient, durable pericardiocentesis model may serve as an effective training tool for ultrasound-guided pericardiocentesis.

ABSTRACT #65

STROKE CODE FROM EMS TO THROMBECTOMY: AN INTERDISCIPLINARY IN SITU SIMULATION FOR PROMPT MANAGEMENT OF ACUTE ISCHEMIC STROKE

AUTHORS: Nicola Feldman, Lorraine Boehm, Magda Zavala, Barbara Dilos, Mamie McIndoe, Latchmi Nagaswar, Katie Walker, Donnie Bell, Devorah Nazarian, Joseph Rabinovich, Stuart Kessler, Laura Iavicoli, Phillip Fairweather, Joseph Farraye, Hazem Shoirah, Suzanne Bentley

PURPOSE: The treatment of acute ischemic stroke is challenging because it requires prompt management, interdisciplinary collaboration, and knowledge of and adherence to specific guidelines. We seek to address these challenges using simulation, which has been shown to be an effective educational technique that enhances patient outcomes, including by improving clinical team performance and allowing for systems testing.

METHODS: An in situ simulation of a stroke code was designed and conducted at unannounced times. Simulations occurred in the real clinical environment, using real hospital equipment and involving the actual on-shift clinicians who would respond. To begin the simulation, an ED team was presented with a 55-year-old female simulated patient brought in by Emergency Medical Services with chief complaint of speech difficulty and right-sided weakness. The team needed to assess her efficiently and appropriately, including activating the Stroke Team via the live hospital paging system. The Stroke Team responded to further coordinate evaluation, obtain appropriate imaging in the radiology suite, and ultimately administer thrombolytic therapy and recognize the need for thrombectomy. Upon simulation completion, debriefing was utilized to review the case, team performance, and critical action completion and timing, as well as to identify areas of success and areas of opportunity. Additionally, latent safety threats were recorded, if present. Finally, participants completed an evaluation to gauge the simulation's effectiveness.

RESULTS: Six stroke code simulations were conducted and debriefed at a variety of hospitals across New York City Health+Hospitals. Debriefings demonstrated robust discussion and learner reinforcement of the importance of timeliness; critical stroke code actions; and the need for collaboration, teamwork, and communication in the management of acute stroke patients. Evaluations indicated that 100% of learners found the simulation to be an effective clinical, teamwork, and communication teaching tool, and all believed it would change their future performance on the stroke team. Additionally, debriefing captured several latent safety threats, which were rectified by collaboration between the simulation, stroke, and hospital leadership teams.

CONCLUSION: Impromptu, in situ simulation helps develop interdisciplinary teamwork and clinical knowledge and is useful for reviewing crucial times and processes required for best-practice patient care. This is particularly valuable when timely management is essential, such as in acute ischemic stroke in this case.

ABSTRACT #66

UROLOGY RESIDENT EXPOSURE AND EXPERIENCE WITH ROBOTIC SURGERY AND SIMULATION IN NEW YORK CITY

AUTHORS: Andrew Tam, Eric Bortnick, Vannita Simma-Chiang, Ketan Badani

PURPOSE: Robotic surgery has increased dramatically in the field of urology since its inception in the early 2000s. As its use has expanded into a variety of urologic procedures, opinions have arisen on the best approach to teaching robotics in urology residency. Observation, following by bedside assisting, and finally experience on the console is the usual approach. Additionally, dry and wet lab sessions have also aided education of residents outside of patient care. Simulator use also aids in education of residents and permits evaluation of robotic skills by mentors.

Without universal guidelines for robotic education, we anticipate that experience varies widely amongst different training programs. In an effort to understand these differences, residents in New York Section of the American Urologic Association (NYSAUA) were surveyed. Additionally, Mount Sinai residents were surveyed before and after a dedicated wet and dry lab session to assess its value in education.

METHODS: A 26-question survey was sent to all resident members of the NYSAUA. The survey contained questions relating to robotic surgery such availability of simulators, wet, and dry labs, as well as perceived comfort in robotics skills. The Mount Sinai Urology Department had a Robotics Education Day that included both simulator and wet lab sessions. A subjective four-question pre-survey, and seven-question post-survey was completed by the participating residents.

RESULTS: The survey was sent to 188 NYSAUA residents, and 26 surveys (13.8%) across 10 training programs were returned. 10 respondents (38.5%) reported knowledge of a robotics curriculum at their program. All respondents reported access to a simulator. Simulator use varied, but appeared infrequent (14/26 reported use "multiple times per year"); only three respondents reported use once a month (11.5%). Wet labs were available to 7/26 respondents (26.9%), and one reported multiple wet labs per year. Lastly, 12/24 (50%) of respondents felt that further training beyond residency is necessary to perform robotic surgery after post-graduate training.

Prior to Robotic Education Day, mean subjective comfort on the robotic console was 38.5 (scale 1-100), and comfort with bedsiding was 57.52. After education day, comfort on the console increased to 58.67 and comfort with bedsiding increased to 67.11. Residents found Robotic Education Day useful for skill training, and open-ended responses indicated desire for more sessions throughout the year.

CONCLUSION: While simulators are readily available, their use is sporadic, and wet labs events are uncommon. A one- day robotics education day shows an increase in resident perceived comfort with robotic technique. Although there was increase with perceived comfort, permanency is uncertain. Increased exposure and training with wet and dry labs and simulators have the potential to increase satisfaction with and confidence in robotic training in residency.

ABSTRACT #67

IMPROVE INTUBATION EFFICACY OF CONTAMINATED AIRWAY USING SUCTION ASSISTED LARYNGOSCOPY ASSISTED DECONTAMINATION

AUTHORS: Yasamin Soltanianzadeh, Christopher Richardson, Daniel Satnick, Steven J. Bolger, Joshua McHugh, Heidi Baer

PURPOSE: SALAD (Suction Assisted-Laryngoscopy Assisted Decontamination) is a proposed method for improving endotracheal intubation (ETI) success in a difficult airway contaminated with blood or vomitus. The purpose of this study is to evaluate the impact of SALAD on intubating a vomitus contaminated airway by measuring (1) time to successful ETI (2) number of intubation attempts and (3) comfort with intubating a difficult airway.

METHODS: A simulation model was created by transforming an adult airway mannequin head with artificial vomitus. A total of 38 EM residents were randomly divided into two groups. The control group (18 residents) was provided routine equipment to attempt ETI. The intervention group (20 residents) received a 5 minute pre-instructional session regarding the SALAD technique, starting with an oral discussion, followed by a live demonstration. Both groups were given an opportunity to intubate the same airway simulation mannequin with the same equipment. The study measured the time to ETI and number of attempts. It was analyzed using a paired t-test. A pre and post-survey (completed by 29 residents) assessed the confidence of intubating the difficult airway with the SALAD technique. A Likert score from 1-10 was used.

RESULTS: Post Graduate Years 1, 2, and 3 EM residents who were present at the residency conference were included in the study. Medical students and attendings were excluded. The mean time to successful intubation was significantly shorter in the SALAD (42.9 seconds) vs control (109 seconds) groups ($p = 0.001$). Successful intubation on first attempt was achieved significantly more often in the SALAD (20/21, 95%) vs. control (8/18, 44%) groups ($p = 0.001$). The number of attempts was significantly less with SALAD (1.05) vs control (1.89) groups ($p=0.01$). The Likert survey highlighted three concepts. First, increased comfort with intubating a difficult contaminated airway after learning SALAD (pre-survey 3.72 ± 2.19, post-survey 6.45 ± 1.70). Second, a preference to use video laryngoscopy as primary management (pre-survey 3.24 ± 1.90, post-survey 5.90 ± 1.82). Lastly, the simulation was an effective educational model to learn SALAD (mean 9.40 ± 0.96).

CONCLUSION: Using SALAD, participants had faster and fewer ETI attempts. It also improved confidence in providers presented with a difficult airway. Our simulation module could be a valuable teaching tool to showcase SALAD.

ABSTRACT #68

PRECIPITOUS DELIVERY WITH SHOULDER DYSTOCIA AND POST-PARTUM HEMORRHAGE SIMULATION

AUTHORS: Steven J. Bolger, Yasamin Soltanianzadeh, Heidi Baer, Joshua McHugh, Daniel Satnick

PURPOSE: Emergency medicine (EM) residents have minimal exposure and formal hands-on training in the independent management of imminent obstetrical deliveries complicated by shoulder dystocia and postpartum hemorrhage (PPH). The purpose of this study was to develop a simulation curriculum with our Obstetric (OB) colleagues to train EM residents in low frequency, high stakes obstetrical emergencies. We hypothesize that simulation will have an impact on addressing the learning gaps in the management of complicated deliveries.

METHODS: 35 Mount Sinai Morningside West EM Post Graduate Years 1-3 residents participated in the study. An online anonymous pre and post survey was distributed to the residents that had three fill in the blank questions. 34 residents completed the pre survey the morning of the conference before starting the simulation case. 32 residents completed the post survey within 24 hours of completing the case. The simulation case was developed by EM and OB simulation trained faculty that focused on managing an imminent vaginal delivery complicated by shoulder dystocia and postpartum hemorrhage. The survey evaluated 1) maneuvers used for shoulder dystocia 2) history and physical exam findings to assess for imminent delivery and 3) treatments for PPH.

RESULTS: PGY 1-3 residents that were present that day for residency simulation conference were included in the study. Medical students and attendings were excluded to help limit the learning level and population focus. In the pre survey, there were 27% blank answers and 18% incorrect responses for the shoulder dystocia maneuver. For assessment of imminent delivery, there were 10% blank answers and 22% and incorrect responses. For treatment of PPH there were 16% blank answers and 1% incorrect responses. In the post survey, there were 2.4% blank answers and 7.2% incorrect responses for maneuvers for shoulder dystocia, 4.5% blank answers and 21.4% incorrect responses for signs of imminent delivery, and 0% blank answers and 1.8% incorrect responses for treatment for postpartum hemorrhage.

CONCLUSION: Our study demonstrates the usefulness of simulation as a teaching tool for a low frequency, high stakes obstetrical emergency. In addition, it provides a simulation-based curriculum that can be used to also inform educators of potential learning deficits and additional areas of focus for future educational models.


Icahn School
Mount Sinai
ANNENBERG
Education
Research

Thank you for attending the Eighteenth Annual Education Research Day

Institute for Medical Education at the Icahn School of Medicine at Mount Sinai

IME LEADERSHIP:

Reena Karani, MD, MHPE
Director
Institute for Medical Education

Robert Fallar, PhD
Assistant Director
Institute for Medical Education

Olga Alagiozidou, MBA
Program Manager
Institute for Medical Education

IME CONTACT INFORMATION:

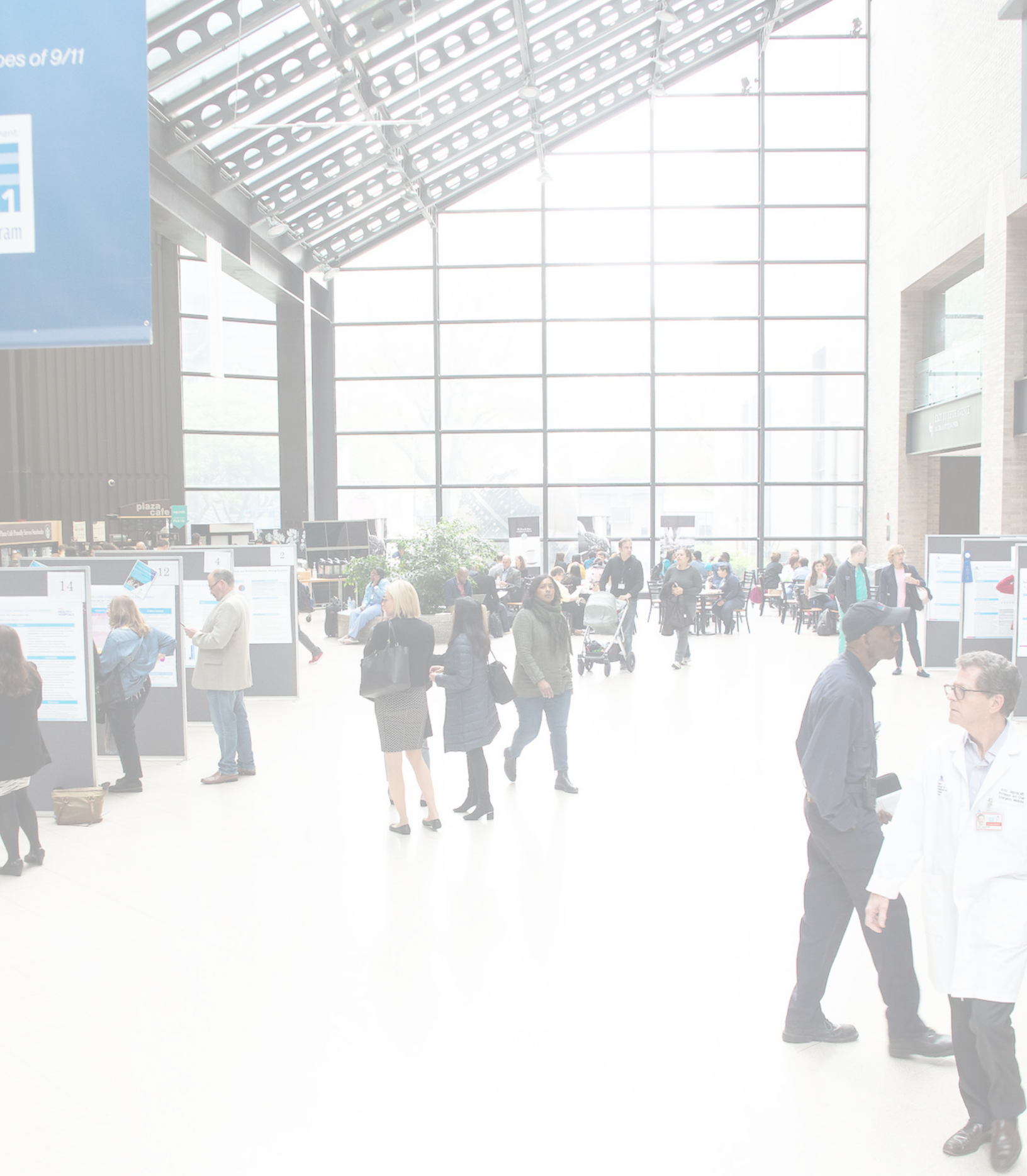
E-mail: InstituteMedEd@mssm.edu

Website: Icahn.mssm.edu/IME

Twitter: @InstituteMedEd

Icahn School of Medicine at Mount Sinai

Institute for Medical Education


plaza
cafe

Icahn
School of
Medicine at
Mount
Sinai

Institute for
Medical Education