Sixteenth Annual

Education Research Day

SPONSORED BY THE INSTITUTE FOR MEDICAL EDUCATION

APRIL 30, 2019

GUGGENHEIM PAVILION ATRIUM

Icahn School of Medicine at Mount Sinai

Institute for Medical Education

TABLE OF CONTENTS

Education Research Day

SELECTION COMMITTEE 2019

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
Andrew Coyle, MD
Linda DeCherrie, MD
Carrie Ernst, MD
Robert Fallar, PhD
Blair Hammond, MD
Lauren Peccoralo, MD, MPH
Kamron Pourmand, MD
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EDUCATION RESEARCH DAY 2019

Welcome to the Institute for Medical Education (IME) at the Icahn School of Medicine's sixteenth 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 49 submitted to receive Blue Ribbons. Blue Ribbon Winners represent outstanding examples of educational scholarship.

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

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

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

ERD PROGRAM

GUGGENHEIM PAVILION ATRIUM

10:00 – 11:00 am
Assessment (posters 1-4)
ROBERT FALLAR, PHD

10:00 – 11:00 am
Professional Development I (Posters 30-33)
BEVERLY FORSYTH, MD

10:30 – 11:30am
Quality Improvement II (Posters 43-45)
ANDREW COYLE, MD

11:00 – 12:00pm
Community Health I (Posters 5-7)
ANN-GEL PALERMO, DRPH, MPH

11:30am – 12:30pm
Professional Development II (Posters 34-38)
SAKSHI DUA, MBBS, MD

12:00 – 1:00 pm
Community Health II (Posters 8-10)
DAVID MULLER, MD

12:30 – 1:30pm
Curriculum (GME) I (Posters 11-15)
MERCEDES PEREZ, MD, PHD

1:00 pm – 2:00 pm
Simulation (Posters 46-49)
CHRISTOPHER STROTHER, MD

1:30 pm – 2:30 pm
Curriculum (GME) II (Posters 16-20)
LAURA STEIN, MD

2:00 pm – 3:00 pm
Curriculum (GME) III (Posters 21-25)
MICHAEL LEITMAN, MD

2:30 pm – 3:30 pm
Quality Improvement I (Posters 39-42)
BRIJEN SHAH, MD

3:00 pm – 4:00 pm
Curriculum (UME) (Posters 26-29)
REENA KARANI, MD, MHPE

This year, 49 abstracts were submitted by faculty, students, trainees and staff across the Health System.
All abstracts were reviewed by the 2019 ERD Selection Committee. Of the 49 submissions, five abstracts have been awarded Blue Ribbons as outstanding examples of educational scholarship.

Please join us in congratulating the 2019 Blue Ribbon recipients:

ABSTRACT #19
IMPLEMENTATION OF AN ASYNCHRONOUS CURRICULUM TO REPLACE TRADITIONAL DIDACTICS: INITIAL OBSERVATIONS AND CHALLENGES
Priya S. Rolfes, Leora Mogilner, Carolyn Rosen, John Rowland

ABSTRACT #20
MAXIMIZING ADMISSIONS: A PEER-LED INTERVENTION FOR FIRST-YEAR INTERNAL MEDICINE RESIDENTS
Rajan Ganesh, Misa Hyakutake, Orysia Kozicky, Tiffany Chen, Ian Kwok, Isabel Guerrido, Leslie Seijo, Matthew Harrington, Daniel Steinberg

ABSTRACT #41
DEBRIEFING IMPLEMENTATION PROGRAM IN THE PEDIATRIC INTENSIVE CARE UNIT
Caroline Black, Christopher Strother, Iris Mandell, Jennifer Kero, Lauren Zinns

ABSTRACT #46
USING SIMULATION TO IMPROVE MEDICAL STUDENT KNOWLEDGE AND COMFORT IN EARLY MANAGEMENT OF ACUTE STROKE
Alana Kornspun, Gurmeen Kaur, Rajeev Motiwala, Michelle Fabian, Laura Stein

ABSTRACT #49
NOVEL EDUCATIONAL NEEDS ASSESSMENT UTILIZING IN SITU CODE TEAM SIMULATION LATENT SAFETY THREAT ANALYSIS
Suzanne Bentley, Lorraine Boehm, Julia LaMonica, Barbara Dilos, Tania Lopez, Mamie McIndoe, Rachel Carroll-Bennett, Alexander Meshel, Alfredo Astua, Ariella Barhen, Akif Qureshi, Andrew Ditchik, Lillian Wong, Colleen Smith

SECTION 1:

List of Abstracts

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

LIST OF ABSTRACTS

SECTION 2:

Assessment

POSTERS 1–4

ABSTRACT #1

DOES SITE MATTER?: IMPACT OF CONTINUITY CLINIC SITE ON MEDICAL KNOWLEDGE

AUTHORS: Christina M. Cruz

PURPOSE: To understand the impact of different Continuity Clinic experiences on global measurements of Medical Knowledge among Internal Medicine Residents at Mount Sinai Beth Israel

METHODS: An initial literature search query yielded no studies exploring the relationship between the continuity clinic learning experience and global measurements of Medical Knowledge. Measurements of Medical Knowledge: In-Training Exam (ITE) scores for Post Graduate Trainees in their 2nd and 3rd year of training during 2016-2017 were collected. End of Academic year rating for Medical Knowledge Milestones were collected for PGY3s graduating in 2017. Two-tailed t-test was used to compare the difference between residents' measurements of medical knowledge (ITE and milestone scores) at our 2 different Continuity Clinic sites. Of note, each site uses the Yale Office Base Medicine Curriculum, along with a Faculty facilitated Journal Club. Topics vary at the 2 different sites.

RESULTS: There is no statistically significant difference in measurements of medical knowledge among Internal Medicine residents at two different Continuity Clinic sites.

CONCLUSION: There are likely a variety of other factors impacting the development of medical knowledge across the GME continuum.

LIMITATIONS: Small sample size, measurement of medical knowledge with inherent bias, inconsistent availability of faculty evaluations

NEXT STEPS:
Collect the similar data for other academic years and aggregate given statistical significance may be limited primarily by small sample size. Understand impact of the continuity clinic experience on other Internal Medicine milestones. Understand impact of the continuity clinic experience on other measures, i.e. burnout/wellness, career choice. Understand other factors impacting medical knowledge.

ABSTRACT #2

WELLNESS ADVISORY PROGRAM TO ADDRESS BURNOUT AND EMOTIONAL DISTRESS AMONG STUDENTS

AUTHORS: Jocelyn Childs, Desiree Santos, Peter Gliatto, Bambi Fisher, Lauren Powledge, Roberto Posada

PURPOSE: A recent multi-institutional study revealed that 56% of medical students screen positive for burnout, 58% for depression and 57% report high fatigue. To address student wellness and mental health, an innovative program was developed in 2017 at The Icahn School of at Mount Sinai, in which all students are assigned a Wellness Advisor, a social worker available for one-on-one meetings focused on self-care and resource building. Research has been initiated to to evaluate student perception and utilization of the program.

METHODS: A survey was sent to all students, those who had utilized the service and those who had not yet participated, at the end of the academic year in 2018 to evaluate and make changes to the program.

RESULTS: At the time of the survey 140 medical students had participated in the program. The majority were first and second year students (78%). Common themes addressed have been adjustment to medical school, a sense of isolation, and how to shift when previous strategies of self-care no longer work in the environment of medical school. The students who responded to the survey felt comfortable reaching out to their WA and felt supported by them. However, over 50% of those who responded felt they would be more likely to meet with WA if they had a perceived need/understanding of benefits of the program or additional outreach.

CONCLUSION: Increased education and outreach to students about the program would positively impact participation rates. Reaching out to students in the beginning of each year and intermittently at designated high stress times would help establish a connection and encourage a longitudinal relationship. Simplifying the logistics around scheduling appointments and increasing availability may also help students access this service.

ABSTRACT #3

BREAD & BUTTER: A NOVEL APPROACH TO DIFFERENTIAL DIAGNOSIS IN MEDICINE

AUTHORS: Charles Sanky, Janey James, Naman Barman, Michael Herscher

PURPOSE: During the preclinical years of medical school, students learn basic science and pathophysiology underlying disease processes organized by organ system or by diagnosis. However, when clinical clerkships begin, students must adapt their approaches to start with the patient's presenting symptoms in order to generate a diagnosis. We sought to develop an interactive way for medical students to generate patterns for medical diagnosis from the constellation of symptoms with which patients present.

METHODS: Through the collaboration of medical students across all years at the Icahn School of Medicine at Mount Sinai as well as Internal Medicine house staff, we developed a website called "Bread & Butter." This platform teaches students frameworks for approaching common chief complaints by discussing pertinent positives, pertinent negatives, physical exam findings, labs, and tests that distinguish one diagnosis from another. Currently, the website features three chief complaints but will feature 20 once completely launched. Users can explore each presenting symptom to understand the "do not miss" diagnoses as well as the most common diagnoses. In addition, they can understand what differentiates one diagnosis from another and be more fully equipped for clinical decision-making. Self- assessment tools allow users to test themselves to reinforce the material they have learned.

We hope to survey rising third-year medical students before the start of their clinical clerkships to understand baseline knowledge and ability to generate differential diagnoses. Over their third year, we plan to monitor their utilization of our platform and continue to assess how their knowledge progresses. Specifically, we will ask students to outline their approaches to common presenting symptoms and compare them to frameworks discussed on "Bread & Butter."

RESULTS: Preliminary focus groups have yielded overwhelmingly positive feedback, with 11/13 students agreeing with the statements, "I believe there is a lack of curriculum for teaching differential diagnoses in medical school" and "I believe this curriculum was effective in teaching differential diagnoses." We expect to see high utilization of this website by third-year medical students throughout their time on clerkships. While test preparation questions and clinical experiences will refine their abilities, students will also credit our platform with influencing their approach to differential diagnosis.

CONCLUSION: We are developing a symptom-based framework for medical students on clinical rotations that we hope will allow them to transition from the disease-based approach of their preclinical years. Its interactive, concise, user- friendly format with the ability to reinforce applicable clinical knowledge will be favored by students learning to become the next generation of physicians.

ABSTRACT #4

IMPACT OF TEACHING MODALITY ON KNOWLEDGE RETENTION IN THE 2ND YEAR HEMATOLOGY PATHOPHYSIOLOGY COURSE

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

PURPOSE: Concordant with a general trend in medical education, there has been increasing time devoted to interactive modalities, such as small group case discussions and less emphasis on the 'traditional lecture,' in the second year hematology curriculum. The course teaches many topics through multiple modalities, understanding that repetition, as well as different methods are likely needed to benefit all students. In our review, there are no published data establishing whether multimodality teaching impacts long term retention of medical knowledge. We plan to evaluate hematology medical knowledge retention over the three years following completion of the second year hematology pathophysiology course. We will evaluate which particular teaching modalities, or, whether the use of multiple modalities, as compared to traditional lecture alone, improves knowledge retention.

METHODS: All second year medical students at the Icahn School of Medicine at Mount Sinai were offered the opportunity to participate in the study. Students participating will complete five multiple choice quizzes: prior to starting the hematology pathophysiology course, after completion of the course, at the end of their third year of medical school, at the end of their fourth year of medical school, and at the end of their intern year. Participants will also complete surveys to capture which modalities the student utilized during the course and about any intervening exposure to hematology content since completion of the course (i.e. interval learning between quizzes).

RESULTS: 34 students (24%) in 2018 and 36 students (24%) in 2019 enrolled and completed the pre-course quiz. As expected, we found a low pre-course level of knowledge of hematology, with correct answer rates (mean quiz score 30%) likely attributable to chance. The immediate post-course quiz showed a significant improvement in fund of knowledge (mean quiz score 79%) for the 2018 cohort with 28 students participating (82% retention). An important limitation was a suboptimal participation rate. Immediate post-course quiz results are being collected for the 2019 cohort. One year post-course quiz results will be collected shortly for the 2018 cohort. These results will be available in April.

CONCLUSION: We demonstrated that pre-course knowledge was low across different topics covered in the course and improved after the course, as expected. Immediate post-course understanding did not vary by the teaching modality or use of multiple modalities. We will report whether this trend continues after one year. We identified a suboptimal participation rate as a limitation to the generalizability of our future results. Moving forward, we hope to provide insights based on long-term retention to inform the best use of limited instruction time.

SECTION 3:

Community Health I

POSTERS 5-7

ABSTRACT #5

SCREENING FOR TORTURE, ASYLUM, AND TRAUMA AMONG PATIENTS SEEKING CARE IN AN URBAN SRFC

AUTHORS: Jonathan Pan, Andrew Leader, Eileen Wang, Nicole Allen, Katherine Garvey, Mary Sun, Ramita Gowda, Peradeba Raventhirarajah, Joe-Ann Moser, Anthony Mell, Theodore Pak, Elizabeth Singer, David C. Thomas, Yasmin S. Meah

PURPOSE: Many immigrants face potential threats to life should they be deported and have histories which may qualify them for asylum, a legal pathway to permanent residency. The asylum process is long, arduous, and fraught with numerous challenges; those eligible have often endured significant trauma, which not only influences a patient's wellbeing but also must be accounted for to navigate the asylum process and inform responsible healthcare. This project seeks to measure the prevalence of histories positive for potential asylum-qualifying and torture-related events in a predominantly immigrant, Latinx urban Student Run Free Clinic (SRFC) patient population while connecting positive-screening patients to the appropriate resources for legal council, social work, mental healthcare, and follow up medical services.

METHODS: We developed a questionnaire to Screen for Torture, Asylum, and Trauma (STAT) among patients who seek care at the East Harlem Health Outreach Partnership (EHHOP); this attending supervised SRFC of the Icahn School of Medicine at Mount Sinai serves exclusively uninsured persons, nearly all of whom are 1st degree immigrants. The questionnaire probed if participants were ever victims of violence or abuse in their home country and the reasons for such abuse or violence. Questionnaires were completed by patients and reviewed by a specialized team who then assigned a case manager to oversee referrals to appropriate resources.

RESULTS: The screening period began in July 2018, and the most recent data collection was January 2019 (22 clinic days, 75 patients screened). 20 patients (26.7%; 95% C.I. 17.1%-38.1%) screened positive as potentially eligible for asylum. Only 1 patient was a new patient while the rest were previously established patients. 13 patients were from Mexico, 2 from Ecuador, and 5 came from Honduras, Ukraine, Panama, Bolivia and a country not specified. 4 patients identified domestic violence, 4 identified LGBT discrimination, 1 identified political climate, and 1 identified gang violence as the reason for leaving their home country. The others left for different reasons (e.g. poverty) or did not specify and require additional follow-up. 4 patients were referred for legal assistance in the asylum application process. 10 patients are being seen by the mental health clinic. 4 patients were not interested in applying for asylum.

CONCLUSION: This data establishes a baseline prevalence of potential asylum-qualifying and torture-related events among patients seen at an urban SRFC. Notably, we found the majority of positive screens were from established patients whose relevant histories had not been detected during routine visits. This work highlights the importance of asking both new and established patients about specific types of asylum-qualifying, torture, or trauma related events, facilitated here by a screening and intervention pipeline, as the detection and incorporation of this information into care management may dramatically influence a patient's course.

ABSTRACT #6

MAXIMIZING STUDENT-RUN FREE CLINIC IMPACT THROUGH THE CREATION OF AN ONLINE TOOLKIT

AUTHORS: Mackenzie Naert, Rohini Bahethi, Yash Maniar, Matthew Simhon, Nicole Comella, Parth Trivedi, David C. Thomas, Yasmin S. Meah

PURPOSE: Student-run free clinics (SRFC) serve an important role in delivering healthcare to the nation's underinsured and uninsured populations. SRFCs also provide a unique experience for health professions students to be involved in the provision of health care to the underserved, as well as the creation and management of a clinic, including administrative and developmental roles. These clinics often face similar challenges in launching and sustaining their services. Information sharing of best practices by existing SRFCs could prove beneficial to the growing network of SRFCs that often operate independently and face geographic, institutional, and financial barriers to effective networking and leadership training. To this end, the EHHOP Consulting Group (ECG) of the Icahn School of Medicine at Mount Sinai, a medical student organization staffed by health professions students trained in offering multi-modal support to free clinics in various stages of development, has created a Toolkit for Launching and Sustaining SRFCs for online publication.

METHODS: Since the creation of ECG in 2015, ECG student consultants have been working with SRFCs from across the nation to help them overcome obstacles and meet specific goals unique to their clinical setting. In doing so, ECG has amassed data on how SRFCs operate, the barriers they face, and creative ways to overcome these challenges. Common challenges include acquiring medications, utilizing electronic medical record (EMR), transitioning student leadership, fundraising, and strategic planning. To this end, ECG has created guides on several topics that will help SRFCs in all stages of development, from new clinics to veteran clinics, maximize their impact on the communities they serve. We compiled these guides using information from EHHOP, client clinics, and literature review, and plan to launch them onto a website for ease of access.

RESULTS: Our website will launch in March of 2019. The following overview sections will be available on the website: "What is a SRFC?" "About ECG," and "Our Consultants," In addition, the following guides will be available on the website: Pharmacy, Electronic Medical Record, Transitioning Student Leadership, Fundraising, and Strategic Planning. Several of the guides have accompanying templates to help steer clinics towards the best solutions for their specific goals and needs. The website also has a form for prospective client clinics to contact ECG to request consulting services.

CONCLUSION: The ECG Toolkit for Launching and Sustaining SRFCs has the potential to greatly impact SRFCs across the nation by providing practical information and templates. Our next steps are to continue to create additional guides and promote the website. We also hope to add a blog, feature client clinics, and foster a partnership with the Society of Student Run Free Clinics to help publicize the website.

ABSTRACT #7

EHHOP CONSULTING GROUP: AN INNOVATIVE MODEL FOR SHARING EXPERT ADVICE ON LAUNCHING AND SUSTAINING STUDENT-RUN ENDEAVORS

AUTHORS: Yash Maniar, Rohini Bahethi, Mackenzie Naert, Andrew Leader, David C. Thomas, Yasmin S. Meah

PURPOSE: Despite provisions of the Affordable Care Act, large numbers of patients depend on free clinics for medical care. Since the 1970's, over 180 student-run clinics (SRCs) have delivered healthcare to the nation's underserved and provided unique service experiences for medical students. Information sharing of best practices could benefit many SRCs that largely operate in isolation and face similar institutional and financial barriers to launching and sustaining their services. Current methods, such as conferences and journal articles, are often inaccessible and rarely tailored to an individual SRC's needs. Herein, we describe a unique medical student consulting organization for nascent and established SRCs.

METHODS: The East Harlem Health Outreach Partnership (EHHOP) at the Icahn School of Medicine at Mount Sinai is an attending-directed SRC in operation since 2004. In 2015, EHHOP launched the EHHOP Consulting Group (ECG), a medical student organization offering free, multimodal consulting and support services to client SRCs. Through collaboration with graduate organizational psychology students at Columbia Teachers College, ECG members were trained in team dynamics, leadership structure, and strategic planning. ECG is now engaged in consulting for client SRCs through site visits, leadership consultations, and online communication to define and achieve their goals. ECG distributes an electronic needs assessment tool to new clients and follow-up surveys to existing clients every 3-6 months, in order to evaluate its success and inform future consulting work.

RESULTS: ECG has worked with the SRCs of 15 US-based medical schools located across the nation, of which 5 were newly developing and 10 were established SRCs. The needs identified with the highest frequency include physician recruitment, leadership design, and strategic planning. Various guides were created to address specific client needs; however, these tools were designed to be broadly applicable to different clinics with similar needs. ECG also created a centralized compendium to document SRC best practices and to address common issues.

CONCLUSION: ECG's mission is to guide the development of SRCs by addressing the unique needs and limitations of each community and institution. To this end, ECG capitalized on EHHOP's 14 years of expertise and collected information on best practices from many SRCs. ECG has emerged as a valuable inter-clinic advising organization that empowers SRCs by providing tailored resources and consulting services. The ECG model, in which an experienced medical student organization trained in consulting principles advises similar groups extramurally, is a novel and effective method for sharing of best practices. This model can be applied to a range of student endeavors, such as mental health outreach, implicit bias training, and advocacy. Longitudinal consulting relationships can promote the impact and sustainability of student initiatives by synthesizing the experience and expertise of many institutions.

SECTION 4:

Community Health II

POSTERS 8-10

ABSTRACT #8

A PATIENT-CENTERED MODEL FOR UNDERSTANDING HEALTH CARE ACCESS IN EAST HARLEM

AUTHORS: Yi Hong Zheng, Yasmin S. Meah

PURPOSE: The patchwork of health insurance programs and providers creates a fragmented and complex system that is often difficult to navigate. Despite the need for future physicians to be knowledgeable about the existing models of care, the determinants of health, and payment models affecting outcomes, medical students are not typically immersed into the healthcare system until late in their training. A great way to help students better understand healthcare is by providing students a framework for health care access navigation during the first year of medical school. To that end, we created a patient navigation app as well as an accompanying 30-minute lecture during the first year of medical school. The aim of this study is to assess the quality of these initiatives in imparting knowledge related to patient navigation and the various resources available to community members.

METHODS: Student perceptions were collected with a post-lecture survey provided to random small groups that congregated immediately after to discuss the lecture. It contained 13 questions including demographic questions, questions designed to assess students opinion on the app on a 5-point Likert scale, as well as open-ended questions that asked specific features of the presentation that they enjoyed.

RESULTS: There were 17 respondents to this survey in the first-year class. A majority of respondents strongly agreed/agreed with statements assessing understandability (94%) and usefulness (88%) of the patient navigation app with many (9/17) commenting how much they enjoyed the hands-on component of utilizing this tool during the presentation. Notably, many respondents (7/17) commented that the health care navigation flow-chart featured in the lecture was particularly useful in helping to understand the various health care access resources readily available to the local community.

CONCLUSION: Initial data in this project suggest that the use of an interactive lecture through a patient navigation app may be helpful to physicians-in-training in understand the various resources available to residents of the community. Future work will focus on improving the presentation to better feature diagrams that guide the organization of such resources. Such engagement attempts to meet the important need for medical students to be better able to recommend resources for community members, to better empathize with patients during their clinical training, as well as to become better versed in the programs that determine their patient populations as future doctors.

ABSTRACT #9

SPEAKING UP IN EMERGENCY MEDICINE

AUTHORS: Nico B. Volz, Tim Snow, Lillian Wong, Mellissa Villars, Suzanne Bentley

PURPOSE: The study objective is to describe resident responses on a validated "Speaking Up" survey by Martinez et al, as an educational needs assessment for a novel simulation initiative to improve speaking up performance for patient safety. A 1999 report by the Institute of Medicine showed that there were as many as 98,000 deaths caused by preventable medical errors each year. This is the first study to distribute the validated survey to emergency medicine and pediatric residents to identify a need for a simulation intervention.

METHODS: This study utilized a descriptive cross-sectional design based on a validated study titled Speaking Up Climate safety scale (SUC-Safe Scale) and professionalism scale (SUC- Prof Scale). The survey, comprised of 13 questions, required participants to respond on a 5 point Likert scale from: 1 strongly disagree to 5 strongly agree. The experimental group consists of 92 emergency medicine residents from one program and 120 pediatric residents from two separate programs who met inclusion criteria of being a resident at the time of taking the survey. The control cohort from the validation study by Martinez et al was comprised of 837 internal medicine, general/orthopedic/plastic/neuro-surgery, urology, and obstetrics and gynecology providers.

RESULTS: A total of 54 emergency medicine residents (response rate 58.7%) and a total of 29 (combination of 11 and 18 responses) pediatric residents (response rate of 24.2%) responded to the survey. Responses differed significantly on 4 of 13 questions when compared to the control group. The control cohort responded with a weighted average of 3.71 (SD 1.07) and 3.46 (SD1.05) on the 5 point Likert scale to questions (6) whether it is difficult to speak up during a patient safety concern and (7) that the culture promotes speaking up for patients not on your team. The emergency medicine cohort responded with a weighted average of 2.51 (SD 0.96; 95% CI: 0.9039 to 1.4961; $p<0.0001$) and 3.04 (SD 1.16; 95%CI: 0.1259 to 0.7141; $p=0.0051$) to questions 6 and 7 respectively. Both pediatric residencies responded similarly to the emergency medicine resident responses and differed significantly from the control cohort (Table 1).

CONCLUSION: The data from the experimental groups suggests that compared to the control cohort, residents feel responsible for speaking up for the safety of patients on their own treatment team. The data from the emergency medicine residency also suggests that residents feel obligated to speak up for patient safety even when the patient is on another treatment team. This was not reflected in the pediatric cohort. However, the data overall grouped around a neutral response for the majority of questions demonstrating a need for a simulation to empower residents to voice and intervene when encountering patient safety concerns.

ABSTRACT #10

STUDENT AMBASSADOR PROGRAM TO INCREASE HPV VACCINATION COVERAGE RATES AMONG ADOLESCENTS IN AN EAST HARLEM HIGH SCHOOL

AUTHORS: Grisselle DeFrank, Melanie Arnold, Martha Arden, Janet Lee

PURPOSE: Human Papillomavirus (HPV) exposure during adolescence is a public health issue because exposure in adolescence can lead to several types of cancer in adulthood. In 2017, New York State health regulations were changed to allow health care providers to administer HPV vaccine to at-risk minors without the consent of parents or guardians. This measure allowed for adolescents to access HPV vaccine confidentially, as part of reproductive health services. Almost two years after enacting this legislation, many adolescents are still unaware that they can consent for the HPV vaccine themselves and may not even recognize the value of receiving it. Without this knowledge, adolescents are presumably less motivated to seek out the vaccine and consent themselves, even if they are familiar with the new consent rules. We developed a peer-educator program led by "Student Ambassadors" to provide and disseminate information about the HPV vaccine to adolescents in the high school community setting with the goal of increasing HPV immunization rates. Our Student Ambassadors were selected from interested student volunteers and were trained and educated about the HPV vaccine, HPV-related disease, and the new consent regulations. Using this information, the Student Ambassadors developed a peer-led campaign with the aim of increasing HPV vaccination rates in a School-Based Health Center (SBHC).

METHODS: Student Ambassadors developed three multimedia, youth-friendly interventions to increase HPV vaccine awareness and advise students that they can receive the vaccine at the SBHC: 1) a brief informational flyer with a QR code linking to more information about HPV and the vaccine; 2) bright posters about HPV and the vaccine designed to appeal to teens in key locations throughout the school; and 3) a video addressing how teens can talk with their guardians about the HPV vaccine. The interventions were implemented on January 16, 2019. Baseline HPV vaccination coverage rates for one NYC SBHC in an East Harlem High School were collected on January 1, 2019. Data collection includes: # of vaccines administered, # of students initiating HPV vaccine series. The data collection period will be April 2019 until June 2019.

RESULTS: We anticipate a vast majority of the 1600 students in the school will see information from at least one of the interventions. As a result, we expect to find a 20% increase in the number of HPV vaccines given to students at the SBHC over a 5-month period from January 2019 to June 2019. We also expect to see a 2% increase in the number of students who have had at least one HPV vaccine from 76.1% to 77.6%. This research is being presented as ongoing.

CONCLUSION: At the conclusion of this study, we hope to find that Student Ambassadors are effective at developing peer-led HPV outreach projects that successfully increase vaccination rates in an NYC urban high school.

SECTION 5:

Curriculum (GME) I

POSTERS 11-15

ABSTRACT #11

FORMALIZING PEER-DRIVEN ELECTROCARDIOGRAM (EKG) LEARNING AMONG INTERNAL MEDICINE RESIDENTS

AUTHORS: Avinash Singh, Laura Bock, Ashish Correa, Angela Palazzo, Susannah Kurtz

PURPOSE: Interpreting EKG's is a critical acquired skill that is expected out of every Internal Medicine trainee. As most residency programs are diverse, and baseline knowledge of residents highly variable, there exists a need to acquire, and demonstrate adequate proficiency in EKG interpretation for effective, equitable and safe patient care. An adequate knowledge base should include the ability to define, recognize, and understand the basic pathophysiology of certain electrocardiographic abnormalities. Various tools that augment traditional didactic EKG learning have been shown to be effective, and replicable. We hypothesized that increasing access to succinct, visually-rich, relevant, peer-reviewed, and easy-to-assimilate material for residents will help satisfy this unmet need.

METHODS: We designed and developed for our residents, an electronic, open-access, and peer- reviewed EKG curriculum in the form of ten visually-rich modules with EKG tracings and pertinent findings, organized in an easy-to- read format. These modules are the foundation for a series of 15-minute, resident-driven discussions focusing on systematically analyzing common electrocardiographic patterns with their interns, which are being conducted during their two-week inpatient cardiology service rotation. The discussions, although resident-driven, can additionally receive input from the Cardiology attending on service, enriching the learning experience further. Completion of the modules is formally included into the service rotation objectives to ensure standardization of instruction and maximum compliance. Residents are asked to interpret 10 standardized EKGs as part of a pre and a post-course survey, to determine efficacy of our educational intervention.

RESULTS: Pre-course needs assessment revealed that most residents have not had formalized EKG instruction, and were optimistic about incorporating peer-directed learning and teaching into their inpatient rotation. It is anticipated that some outcomes will also be more subjective – residents' confidence in their ability to identify life threatening or treatment-altering findings on their own, and to be educators to their peers. The study is currently underway, and final results should be available soon.

CONCLUSION: Learning to accurately interpret EKGs is an important skill for internal medicine trainees, and with our study we hope to validate the use of simple, innovative and peer-driven teaching methodologies to help overcome subjective barriers of confidence and aptitude, and improving knowledge acquisition and retention. We hope to assess retention by re-challenging participants to interpret EKGs six months after completing the course. We will expand this program to residents working in the ICUs and the General Medical Floors, to ensure democratization. This method can also be used to help augment teaching other skills, such as point-of-care ultrasound and chest x-rays in the ICU.

ABSTRACT #12

FILLING THE GAP: A GERIATRICS AND PALLIATIVE CARE LEADERSHIP NEEDS ASSESSMENT

AUTHORS: Ayla Pelleg, Gabi Schiller, Helen Fernandez, Elizabeth Lindenberger

PURPOSE: By 2030, those over the age of 85 will double to about 10 million. Despite this demographic imperative, there is a significant shortage in geriatricians and palliative care specialists. To best utilize this scarce, specialty resource, we propose the development of an elite workforce of future geriatrics and palliative care leaders who will lead health systems to best meet the needs of a vulnerable, aging population. Currently, there are no leadership curricula developed for Geriatric and Palliative Care fellows. Therefore, a needs assessment was conducted as an initial step to help establish a future leadership fellowship track within Geriatrics and Palliative Care fellowship programs.

METHODS: Thirty-three key informants were interviewed, including national experts in the field of Geriatrics and/or Palliative care as well as former fellows who have graduated from Mount Sinai's Geriatric and Palliative Care Fellowship program. In total, 19 experts and 14 former fellows were interviewed. These interviews were conducted via video and/or phone conference over six months. Subsequent participants were recruited via the "snowball method," i.e. asking key informants to suggest other leaders in the field.

Key informants (N= 33) participated in qualitative interviews that ranged from 15-60 minutes. Interview questions were formulated by both a created taskforce for this needs assessment and based on previously distributed surveys to former Mount Sinai Geriatric and Palliative Care fellows. All interviews were audio recorded and transcribed.

A qualitative thematic analysis of all interviews was completed. Each interview was coded by two researchers to improve interrater reliability using the coding software NVivo. A coding dictionary, broken down by skills and knowledge categories, was created using both inductive and deductive reasoning.

RESULTS: Recruited participants saw the added value of a healthcare leadership track. Interviewees emphasized the need for fellows to have practical, diverse experiences during training to help prepare them for future leadership positions. Knowledge deficits emphasized were healthcare finance literacy and healthcare policy. Important skills a junior faculty should acquire included: negotiation, mentorship, and networking. Working in interdisciplinary teams and across professions was seen as a strength among Geriatricians and Palliative Care providers.

CONCLUSION: This needs assessment highlights the unique skillset and perspectives Geriatricians and Palliative Care physicians bring to healthcare leadership. Most interviewed participants were thrusted into leadership positions without formal leadership training. There is a need and interest for leadership training for future Geriatricians and Palliative Care physician leaders to help care for this increasingly complex and aging population.

ABSTRACT #13

KEYSTONES OF DEVELOPMENT ONLINE RESIDENCY CURRICULUM: WEAVING ATTACHMENT, AUTONOMY, EXECUTIVE FUNCTION INTO WELL-CHILD VISITS, BIRTH TO 5

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

PURPOSE: To assess the effectiveness and likeability of an online, animated resident curriculum focused on changing resident behavior, knowledge, attitudes, confidence, and perceived barriers to promote positive parenting practices that foster optimal child development. Research has identified specific parenting behaviors that promote children's cognitive, social and emotional health. Per the AAP, pediatricians should counsel on these behaviors in primary care, but they may be less likely to do so without formal training during residency. An e-learning parenting curriculum allows dissemination to multiple residency programs with little demand on faculty while providing a flexible learning experience for residents.

METHODS: In this pilot study, pediatric residents at 5 institutions completed the Keystones of Development, an online 13-module curriculum, in their behavior and development rotation. We used a pre-posttest study design to assess intervention effect of self-reported behavioral outcomes (discussing, modeling, and praising positive parenting practices) and predictors of behavior with paired t-tests. Likeability and use were assessed at posttest using a 5-point Likert scale.

RESULTS: 24 pediatric residents (mean age=28.4yrs; 79% female) participated. Within one-month post-intervention, there was a large statistically significant increase in the counselling behaviors that promote positive parenting: discussing ($p<0.01$; $d=1.03$), modeling ($p<0.01$; $d=0.97$), and praising ($p<0.05$; $d=0.64$). A statistically significant decrease in perceived barriers ($p<0.01$) and an increase in knowledge ($p<0.01$) was seen. There was a ceiling effect for attitudes. Self-efficacy to perform each respective behavior increased significantly ($p<0.01$). Residents liked the curriculum (4.2/5) and found it useful in practice (4.3/5).

CONCLUSION: The Keystones of Development online curriculum was well received by pediatric residents and resulted in increased promotion of positive parenting practices during well-child visits. This study yields promising results that suggest benefits to the field through wider dissemination and use.

ABSTRACT #14

LEVEL OF COMFORT AND KNOWLEDGE REGARDING INFORMED CONSENT AMONGST PEDIATRIC RESIDENTS

AUTHORS: Cassandra Koid Jia Shin, Sebastian Proano, Gwen Raphan

PURPOSE: Our objective was to assess pediatric residents' knowledge and level of comfort obtaining informed consent from patients and families, a concept that is important, yet rarely formally taught.

METHODS: An online questionnaire was circulated amongst pediatric residents in Elmhurst Hospital Center for this cross-sectional, questionnaire-based study.

RESULTS: All 28 respondents had obtained consent from a family member or patient at some point during residency. 60.7% of residents learned to obtain consent by watching their seniors obtain and 75% learned by having an informal discussion with the supervising attending or resident. Few residents (10.7%) had a formal didactic session and 28.6% report that they obtained consent without any preparation. 57.1% of residents were not supervised the first time they obtained consent. Of those supervised, only 17.9% received feedback.

Most residents report feeling skilled and confident obtaining consent for computed tomography with contrast, lumbar puncture and blood transfusion; however, only 35.7% of residents report that they had seen or performed the procedures to which consent has been sought.

None of the respondents were able to explain the legal consequences associated with obtaining written informed consent. Finally, the majority of residents (60.7%) agree that they would benefit from training in obtaining written informed consent.

CONCLUSION: Most residents feel underprepared when tasked with obtaining consent especially with procedures they have never observed or performed. More structured training in informed consent is necessary for our pediatric residents.

ABSTRACT #15

BRIDGING THE GAP IN FAMILY PLANNING AND CONTRACEPTION COUNSELING AMONG INTERNAL MEDICINE RESIDENTS

AUTHORS: Heather Viola, Michele Stanchina, Tamara Goldberg

PURPOSE: Nearly half of all pregnancies in the United States are unplanned, yet less than 50% of reproductive-aged women report having received contraceptive counseling from their primary medical provider. Barriers continue to exist at the provider level, often due to perceived lack of knowledge. Therefore, we sought to develop a formal curriculum for IM residents at Mount Sinai St. Luke's West to improve knowledge, skills, and comfort with contraceptive counseling with the aim of bridging the gap between need and delivery of family planning services for reproductive- aged women.

METHODS: We conducted a curricular needs assessment through review of existing curricula, informal interviews with primary care faculty educators, and surveys of current residents to identify trainee comfort level and knowledge of contraceptive counseling. We then designed a three-phase longitudinal curriculum to be piloted on our primary care (PC) track residents. Phase 1 incorporates online modules for content delivery focused on contraceptive methods as well as techniques for improving communication with patients. In Phase 2, trainees will utilize our simulation lab to apply history-taking and patient-centered communication skills to standardized patient encounters. Finally, Phase 3 will involve applying real-time contraceptive counseling to a continuity patient under direct observation by faculty. Residents completed a pre-intervention survey and will be asked to complete a final survey assessing knowledge gained and self-perceived changes in behavior.

RESULTS: Review of our existing curriculum yielded a lack of any existing formal family planning sessions. In addition, faculty stated that most residents seem to have a low threshold to defer this counseling and prescribing to gynecologists. 100% of the PC track residents completed the pre-intervention survey. 50% of respondents had never prescribed OCP's and only 16% felt very comfortable discussing family planning. 83% cited lack of knowledge about the different contraceptive methods as the largest barrier to discussing contraception with their patients. Trends in knowledge of different contraceptive methods included: emergency contraception administration (0%), efficacy of IUD's (50%), longevity of progestin implants (66%), administration of progestin injections (83%), and side effects of OCP's (100%). A post-curriculum survey will be completed after Phase 3.

CONCLUSION: Contraceptive counseling has not been prioritized in our existing curriculum, which in turn, has produced ill-prepared trainees entering primary care. Our results suggest that the majority of residents in our pilot do not feel comfortable discussing family planning with patients or prescribing contraception. In addition, while residents are adept in their knowledge of OCP's, they lack knowledge of other contraceptive methods. Results of post-intervention survey data (after completion of Phase 2 and Phase 3) will help us understand the impact of our curriculum in addressing these gaps.

SECTION 6:

Curriculum (GME) II

POSTERS 16-20

ABSTRACT #16

PLASTIC SURGERY MILESTONES COMPETENCIES AND CHIEF YEAR COSMETIC CASE VOLUME: IS THERE A RELATIONSHIP?

AUTHORS: Ilana G. Margulies, Paymon Sanati-Mehrizy, Hope Xu, Felipe Molina- Burbano, Peter Taub

PURPOSE: The Milestones program in Plastic Surgery was established by the Accreditation Council for Graduate Medical Education (ACGME) in 2014 in order to standardize evaluations in a range of reconstructive, cosmetic, and general competencies foundational to Plastic Surgery education. However, despite the widespread belief that clinical exposure is fundamental to competency achievement, to our knowledge, there have been no studies evaluating the association between achievement of Plastic Surgery Milestones competencies and volume of cases performed in those clinical areas. Therefore, we sought to begin exploring this topic by evaluating the association between volume of cosmetic cases performed by chief residents and their levels of achievement in respective Milestones competencies.

METHODS: A retrospective review of operations performed by chief residents at our primary training institution was conducted for eight residents graduating from 2015 – 2018. Cosmetic cases were isolated and classified by type of operation. The association between cosmetic case volume and levels of achievement in respective Milestones competencies was performed using Spearman's rank correlation coefficient ($p < 0.05$).

RESULTS: No significant association existed between volume of chief year cosmetic cases at our primary training institution and levels of achievement in Milestones competencies in Facial Aesthetics Patient Care ($r = 0.53$, $p = 0.18$), Facial Aesthetics Medical Knowledge ($r = -0.58$, $p = 0.25$), Non-Cancer Breast Surgery Patient Care ($r = 0.43$, $p = 0.29$), Non-Cancer Breast Surgery Medical Knowledge ($r = -0.58$, $p = 0.13$), Cosmetic Trunk and Lower Extremity Patient Care ($r = 0.23$, $p = 0.64$), and Cosmetic Trunk and Lower Extremity Medical Knowledge ($r = -0.58$, $p = 0.25$).

CONCLUSION: The lack of significant association between chief year cosmetic case volume and levels of achievement in respective Milestones competencies potentially supports the position that competency achievement in surgical education does not have a linear relationship with clinical exposure. However, the minimal variation of Milestones levels achieved by chief year residents may have limited our ability to detect a significant association. Thus, we hope that this study provokes further investigation of the relationship between Milestones competencies and resident case volume throughout all years of Plastic Surgery education.

ABSTRACT #17

CHALLENGES AND STRATEGIES FOR TRAINING PHYSICIAN SCIENTISTS IN THE FIELD OF PSYCHIATRY AT MOUNT SINAI

AUTHORS: M. Mercedes Perez-Rodriguez, Asher Simon, Michelle Hernandez, Jessica Ables, Yazmin DelValle, Cindy Chiu, René Kahn, Antonia New

PURPOSE: While funding and discoveries in neuroscience have grown exponentially over the past few decades, the physician-scientist workforce that is required to translate these research findings to the bedside has remained stagnant. In fact, throughout this "neuroscience revolution", the percentage of MD/PhD graduates entering residency training in psychiatry has remained unchanged at only 5%. Not surprisingly, this has contributed to an enormous practice gap (i.e., it can take many years before critical findings from neuroscience research are implemented in psychiatric practice and can have an impact on individual patients).

Programs such as the federally funded MSTP MD/PhD programs have an important role in training physician scientists capable of making breakthroughs; however, such programs are not producing enough MD/PhD psychiatrists and have some limitations. Traditional MD/PhD programs divide scientific training from clinical training and leave a large gap of time (3-6 years) between PhD completion and further post-doctoral research training. Moreover, the field of PhD training is often unrelated to the clinical residency and very few MD/PhDs (5-6%) choose a residency field related to psychiatry or neuroscience.

METHODS: In 2008, we launched a 4-year Psychiatry residency research track (termed the "Physician-Scientist Track") for MD/PhD graduates, which is designed to launch a successful research careerafter residency. To further address the challenges described above and increase the workforce of physician scientists in Psychiatry, in 2013 we developed a novel program: Our 7-year combined PhD and psychiatry residency training program (PhD+ Track) is designed to produce fully-trained psychiatrists who simultaneously complete psychiatry residency and PhD training.This program is funded by an R25 grant from the NIMH.

RESULTS: Over the past few years, we have had a continuous increase in the numbers of applicants to both of these research tracks: Physician-Scientist Track: 33 in 2018, 53 in 2019; PhD+ Track: 15 in 2017 (not recruiting in 2018), 20 in 2019. Since launching the PHD+ program in 2013, we have recruited 5 outstanding residents for this program and filled all available slots every year. 4 residents have already completed the PhD didactics, and 1 has defended his dissertation and has joined the faculty.

CONCLUSION: Our Physician-Scientist and PhD+ Research Tracks provide two alternate pathways for strengthening the workforce of MD/PhD physician scientists in the field of psychiatry. It is feasible to combine psychiatry residency and PhD training in a single, 7-year program.

ABSTRACT #18

IMPLEMENTING A PALLIATIVE CARE CURRICULUM FOR PEDIATRICS HOUSESTAFF TO COMBAT COMPASSION FATIGUE

AUTHORS: Meygan J. Lackey, Joanne Hojsak, Andrea Weintraub

PURPOSE: Mount Sinai Hospital (MSH) is a known pioneer in the fields of Geriatrics and adult Palliative Medicine. While we have made great strides in improving care for adults with serious or terminal illnesses, we have been slow to implement the necessary services for dying or seriously ill children. Pediatric suffering and loss have a clear impact on all members of the healthcare team; however, house staff are particularly affected given their close proximity to patients. The literature suggests the majority of pediatricians feel underqualified to provide palliative and end-of-life (EOL) care to children. Currently, there is no formal educational curriculum in place at MSH to train pediatric residents on these topics. We hypothesize that a lack of confidence surrounding the provision of these services is increasing rates of compassion fatigue among pediatrics residents.

METHODS: To address this educational need, we propose the implementation of a lecture "mini-series" to provide basic training on palliative and EOL care for pediatrics house staff. Lectures will include the following topics, which were selected from The Textbook of Interdisciplinary Pediatric Palliative Care: Indications for Palliative Care, Initiating Difficult Conversations, Symptom Management at the End of Life, Pain Management, Navigating Spiritual and Cultural Diversity, Logistics, and Caring for the Caregiver. Lectures will be followed by discussions, small groups, or role-playing. The curricula will be rolled out over the course of the upcoming academic year (2019-2020) during protected academic half days. Success will be measured via a mixed-methods approach. Levels of compassion fatigue, as well as confidence providing PPC & EOL care, will be measured using quantitative and qualitative surveys at both base- and end-line. Residents will also be asked to assess the quality of individual lectures.

RESULTS: N/A

CONCLUSION: Recent studies demonstrate a nationwide discrepancy, similar to the one at Mount Sinai, in the amount and quality of adult versus pediatric palliative care services offered in hospital settings, with pediatric services being grossly underfunded and underprioritized. As advances in medicine are only increasing the prevalence of children living with medically complex conditions, robust PPC programming is more important now than ever. It is not only patients who would benefit from having physicians with more training and experience in PPC and EOL care, but physicians themselves. By equipping our physicians with the tools they need to succeed in difficult patient interactions, we may be able to decrease rates of compassion fatigue.

ABSTRACT #19

IMPLEMENTATION OF AN ASYNCHRONOUS CURRICULUM TO REPLACE TRADITIONAL DIDACTICS: INITIAL OBSERVATIONS AND CHALLENGES

AUTHORS: Priya S. Rolfes, Leora Mogilner, Carolyn Rosen, John Rowland

PURPOSE: Due to ever-increasing clinical demands it has become challenging to find protected time for resident didactics. The Physician Education & Assessment Center (PEAC) at John Hopkins (JH) provides a pediatric ambulatory online curriculum used by many residency programs. While studies have shown positive learner satisfaction and improved knowledge in residents using the JH internal medicine curriculum, there have been no studies published that assess the feasibility and efficacy of an asynchronous pediatric ambulatory curriculum. Our goal is to compare resident use of an asynchronous online curriculum 6 months after implementation to a previous in- person (IP) didactic format and identify trends between learner expectations and actual participation.

METHODS: A pre-intervention survey was sent to 37 PGY2 to PGY4 pediatric residents who had exposure to at least 1 year of the IP curriculum. Questions assessed attendance and satisfaction with the IP curriculum, expectations of the new PEAC curriculum, and personal preference for curriculum type based on learning style. All residents were instructed to sign up for the PEAC curriculum and given a proposed schedule so modules would be completed by academic year's end. Data was collected on PEAC module completion for the first 5.5 months after implementation. Wilcoxon rank-sum test and correlation analyses were used as indicated.

RESULTS: 31 residents completed the pre-survey for a response rate of 84%. Although residents were satisfied with the IP curricular content, they estimated they attended only 50% of lectures, and of those attended, they estimated being >10 minutes late to 49% of lectures. Residents anticipated they would complete 70% of PEAC modules over the year (or 35% over 6 months), however, after almost 6 months they only completed on average 6% of the modules. 65% of residents stated they would prefer an online curriculum to an IP curriculum. There was no association between learning tool preference and number of modules completed ($p=0.60$). Correlation analysis showed no linear relationship between an individual's projected and actual modules completed ($r=0.11$; $p=0.55$).

CONCLUSION: Though the concept of an asynchronous curriculum was well received, most residents did not come close to completing the projected number of modules over 6 months. Barriers to participation must be explored and addressed in order to improve resident engagement. Once participation has improved, future steps will include comparing knowledge outcomes between curricula.

ABSTRACT #20

MAXIMIZING ADMISSIONS: A PEER-LED INTERVENTION FOR FIRST-YEAR INTERNAL MEDICINE RESIDENTS

AUTHORS: Rajan Ganesh, Misa Hyakutake, Orysia Kozicky, Tiffany Chen, Ian Kwok, Isabel Guerrido, Leslie Seijo, Matthew Harrington, Daniel Steinberg

PURPOSE: Performing admissions, including assessments and plans, for newly admitted patients is a core component of Internal Medicine training. However, the proportion of admissions conducted by first-year interns varies across residency programs, with no evidence to support ideal admission goals or strategies to facilitate them. In our program, senior residents had been conducting the majority of admissions, leading several first-year interns to voice interest in performing more admissions themselves under supervision by senior residents.

METHODS: In March 2018, a peer-led committee was formed to collect baseline admission rates and anonymously survey (via Google Forms) house staff officers to explore their attitudes towards admissions. Based on these data, the committee developed an intervention aimed at increasing the rate of intern-led admissions by 50% over one academic year.

The intervention was launched in August 2018 and consisted of three components: 1) an introductory email raising awareness of the admission rate imbalance; 2) surveillance of daily admissions obtained from the electronic health record (GE Centricity Enterprise); and 3) a six-month series of peer-authored, biweekly emails reporting percentages of intern-completed admissions and encouraging interns to complete at least one admission per long call and night shift.

RESULTS: Fifty-nine of 114 (51.7%) house staff officers responded to the pre-intervention survey. Eighty-one percent agreed that interns should conduct more admissions. Reported concerns included decreased resident efficiency and creating additional work for interns. Prior to our intervention, 119 of 1,147 admissions (10.4%) were completed by interns. Post-intervention, 644 of 3,952 admissions (16.3%) were conducted by interns — a 56.7% relative increase from the pre-intervention rate ($t=4.88$, $p=0.0018$, 95% CI -8.7662 to -3.0438).

CONCLUSION: Performing admissions helps residents progress through multiple ACGME/ABIM milestones. Despite barriers identified in our pre-intervention survey, the data demonstrates a statistically significant 56.7% increase in the rate of intern-led admissions six months after the initiation of our intervention, exceeding our initial goal of 50%.

The intervention likely benefited from being peer-led with a built-in structure of consistent, positive reinforcement. This design-by-committee served to evenly distribute implementation responsibilities while emphasizing a house staff- driven attitude of proactive self-education. This approach was particularly important given the stated concerns that the initiative may result in additional work for house staff - a factor that was highlighted by a relative increase in intern-led admissions during night shifts. Beyond the six-month intervention period, data collection is scheduled to continue and a planned post-intervention survey may identify new barriers to sustainability and opportunities to further improve the educational experience of admissions for first-year interns.

SECTION 7:

Curriculum (GME) III

POSTERS 21-25

ABSTRACT #21

SHELFAPALOOZA: A START TO AN INTERNAL MEDICINE CLERKSHIP REVIEW COURSE

AUTHORS: Ramachandra P. Reddy, Horatio Holzer, Andrew Coyle, Harish Jasti, Dennis Chang

PURPOSE: The internal medicine clerkship exam or NBME for internal medicine is an important test that correlates with Step 2CK scores and subsequently residency placement. There has been data in the past illustrating that a resident run review course in psychiatry and in OBGYN was helpful for students both qualitatively and quantitatively. However, to date there is no data on an internal medicine clerkship review course. Students at Icahn School of medicine at Mount Sinai (ISM MS) currently receive a few hours of lectures every week during their medicine clerkship on different topics relevant to internal medicine. Our aim with our formal review course is to qualitatively help students feel like they understand the more difficult topics in internal medicine better as well as quantitatively increase their NBME scores.

METHODS: This is a prospective, one year study at the ISM MS with third year medical students from July 2018-June 2019. A needs assessment was done on February 2018 with eight third year medical students that had just completed the internal medicine clerkship and the NBME exam. Students thought they performed the poorest on pulmonary medicine and renal medicine and recommended a review series tailored to these areas. Students also requested a review on how to best answer test questions by analyzing how to approach questions. With this in mind, a review lecture series was developed for the pulmonary and renal subsections. All students that started their clerkship after July 2018 will receive the pulmonary lecture (~100% of students, n=140) and all students after October 2018 (~ 75% of students, n=110) will receive both the pulmonary and renal lectures. For qualitative analysis, students received a survey after the lecture with a Likert scale of 1-5 asking about the quality of the presenter, teaching format, and educational content. For quantitative analysis, an objective review of the NBME data is pending IRB approval as we want to compare scores over the past few years with scores this year, paying particular attention to any changes in the pulmonary and renal subsections.

RESULTS: Thus far, the pulmonary lecture has been given twice and the renal lecture has been given once. Subjective survey responses using the Likert scale for the pulmonary lecture illustrated a score of 4.5/5 (n=25) and for the renal lecture 4.5/5 (n=15) with respect to the quality of presenter, teaching format, and educational content each. We are pending IRB approval for a quantitative analysis of the NBME scores.

CONCLUSION: Overall, our qualitative analysis illustrates that students found the lectures helpful both for content and for teaching format. We will be exploring if there was a quantitative difference noted with the NBME scores. It seems that students benefit from a clerkship review course and this review will hopefully become a model for organizing other clerkship review courses at Mount Sinai and other academic institutions.

ABSTRACT #22

THE FEASIBILITY OF INTRODUCING A WELLNESS CURRICULUM INTO A PULMONARY AND CRITICAL CARE MEDICINE FELLOWSHIP TRAINING PROGRAM

AUTHORS: Sakshi Dua, Rachel Potter

PURPOSE: Burnout is an increasingly recognized problem among Pulmonary and Critical Care Medicine (PCCM) physicians, and if unaddressed, can lead to significant health consequences – both physical and emotional - for medical providers. This ultimately impacts the quality of patient care. Well-being is not merely the absence of burnout. A large component of well-being amongst trainees in medicine is related to self-care. Self-care is multi-dimensional as it relates to adequate sleep, nutrition, exercise and emotional well-being. We introduced a pilot wellness curriculum (WC) utilizing a social worker (SW) intensively trained in dialectical behavior therapy (DBT) who moderated Facilitated Discussions (FD) to address barriers to self-care and physician well-being among PCCM fellowship trainees at a single institution

METHODS: We performed pre and post-curriculum anonymous surveys to elicit attitudes and identify barriers to self- care practices at a single institution PCCM fellowship training program with 15 trainees. Following the baseline survey, we developed a WC and introduced weekly one hour wellness sessions for 8 months utilizing a structured format for FD with the designated SW trained in DBT. Attendance was voluntary but anonymously tracked. Healthy snacks were provided. Topics for FD included: empathy, mindfulness, gratitude, self-compassion, burnout, meaning in work, positive psychology, sustainable wellness, stress management, grounding, constructive communication, resilience, long term wellbeing and goal setting among others.

RESULTS: Survey response rate was > 90% both pre- and post-curriculum amongst the 15 trainees. Attendance was variable with an average of four attendees per session. The post-curriculum survey revealed a 16% increase in the number of fellows engaging in self-care activities including implementing mindfulness practice. There was a 23% increase in trainees feeling recognized for their contributions. A 12% decrease in number of trainees expressing work related stress was noted. There was no change in number of trainees noting satisfaction with work-life balance and in finding work meaningful. The biggest barrier to attending wellness sessions was related to time (including patient care responsibilities, heavy clinical rotation and personal responsibilities).

CONCLUSION: An introduction to WC amongst PCCM fellowship trainees via FD moderated by a SW is feasible. While time commitment remains a significant barrier to attendance, following such a curriculum there were positive trends seen in trainee's buy-in towards self-care practices and work related stress. Future directions should include identifying drivers of work-related stress among PCCM trainees.

ABSTRACT #23

DEVELOPMENT OF PATHOLOGY EDUCATION DIGITAL ARCHIVES: CASE VIEWER AND SLIDE BANK

AUTHORS: Tahyna Hernandez, Brandon Veremis, Alexandros Polydorides, Garrett Desman

PURPOSE: The primary aim of this initiative is to improve learning among pathology residents by storing, archiving, and cataloguing interesting and instructive cases in an easily accessible digital medium. Secondary aims include integration with social media in a faculty-monitored, patient deidentified format and improvement of our informatics curriculum by encouraging the use of digital pathology. In a previous survey, we found that pathology residents desire greater social media presence and easier access to high-yield cases as a way to study for tests such as the pathology resident in-service examination and certification examinations. To that end, we created two software programs: Slide Bank (an internally accessible, whole-slide imaging software) and Case Viewer (a publicly accessible case database with static images).

METHODS: Slide Bank and Case Viewer were both created using the Ruby on Rails web development platform. To ensure no protected health information was exposed, residents uploaded the cases in a de-identified format which then required approval by the attending pathologist and a third party (HIPPA checker) prior to releasing the case to the public. The web links to Case Viewer were promoted on the Mount Sinai Pathology Facebook page and the Mount Sinai Pathology Instagram page. Statistics for database content usage were extracted from the Ruby on Rails console. We also used Google Analytics to extract usage data in order to assess the effectiveness of Case Viewer.

RESULTS: Case Viewer was implemented in January 2018, and within 12 months, 149 cases had been created, an average of 12.4 cases per month. Of these, 57 (38%) were approved for public viewing by corresponding pathology faculty. Google analytics revealed that during January 2019, 780 sessions were created, 45% of which originated in the United States, with the remaining spread out over 69 countries. Slide Bank was implemented in August 2018 and by January 2019, it had amassed 882 cases (an average of 73.5 cases uploaded per month) with 1,127 whole slide images (an average of 1.3 images per case). Slide Bank is currently used every two weeks by pathology residents during unknown case sessions.

CONCLUSION: Digitization of educational resources benefits both individual residents and residency programs. Case data can be available at any location and is easily searchable. Publicly available cases and social media can be used to promote residency programs nationally and internationally while also providing beneficial resources to areas of the world that lack easy-to-access, free educational materials. Faculty participation and continuous database monitoring is required to assure quality of medical information and to prevent inadvertent exposure of PHI to the public. Internal faculty and resident involvement and commitment is necessary for entering, reviewing, and organizing information. These types of software are likely applicable to other residency programs, especially those which are image based (e.g., radiology).

ABSTRACT #24

BEYOND THE CLINIC WALLS: PREPARING RESIDENTS TO OPTIMIZE CARE FOR THE VULNERABLE POPULATIONS THEY SERVE

AUTHORS: Tamara Goldberg, Dipal Patel

PURPOSE: Despite being on the front lines of delivering healthcare to underserved patients, most graduate trainees in this country are inadequately prepared to address the specific social determinants of health and health disparities relevant to the populations they serve. This in turn, perpetuates poor health outcomes for such patients. To increase trainee preparedness in caring for vulnerable populations, we designed and implemented an experiential community health rotation in the neighborhood surrounding our residents' outpatient clinic site in Central Harlem.

METHODS: This two-week community-oriented curriculum involved all PGY1 internal medicine residents in the Primary Care Track at Mount Sinai St. Luke's-West. The goal for our learners was to recognize the impact of the local community on health, understand health disparities relevant to their clinic population, and become familiar with clinical-community partnerships to address patient health barriers. The curricular content was divided into four themes: general principles of population health, caring for at-risk populations, health systems and policy, and professional development. To meet the goals and objectives for each theme, we incorporated classroom, clinic, and community based learning activities. At the end of the rotation, resident participants were asked to choose an area of focus for a longitudinal scholarly project relevant to their patient population. Pre and post curriculum surveys were administered to gauge preparedness in addressing the needs of underserved populations, using 100 point slider scales. Pre and post surveys were linked by a unique identifier code and paired sample t-tests were used for analysis.

RESULTS: 4 PGY1 residents participated in our pilot rotation. Self-reported preparedness in addressing the social needs of patients increased from a pre-intervention mean of 46.5 to a post-intervention mean of 88.25 ($p = .032$). Significant improvements were also noted in perceived understanding of the role of community partnerships in improving health outcomes ($p = .034$), knowledge of patient demographics ($p = .04$), and knowledge of local health disparities ($p = .011$). Feedback from invited faculty and community speakers was overwhelmingly positive, with 100% willing to participate again.

CONCLUSION: A two-week rotation dedicated to recognizing and addressing the social d eterminants of health and health disparities that impact our trainees' clinic population led to increased self-reported preparedness to care for vulnerable patients. Next steps will be to expand the curriculum to accommodate more trainees and to examine the impact of the curriculum on both resident behavior and patient health outcomes.

ABSTRACT #25

IMPLEMENTATION OF A LONGITUDINAL EQUITABLE PATIENT-CENTERED CARE CURRICULUM FOR INTERNAL MEDICINE RESIDENTS

AUTHORS: Tamara Goldberg, Dipal Patel

PURPOSE: The recognition and mitigation of social barriers to health is essential in optimizing preventative health outcomes for patients. Yet nationally, only a third of residents report having received training in culturally-competent care specific to the populations they serve. In addition, a recent survey of residents in our program indicated that only 8% of trainees felt very prepared to address the social needs of their underserved patients in clinic. Recognizing this educational gap, we developed a longitudinal, equitable patient-centered care curriculum for PGY1 categorical residents in our Internal Medicine residency program.

METHODS: Beginning in September 2018, all categorical PGY1 residents were required to attend a three-hour, faculty- led workshop during each ambulatory block as part of a new "Art and Practice" conference series. During each small group session learners were introduced to general concepts of equitable patient-centered care with the goal of tailoring such principles to the specific needs of their clinic patient population. To capture all quartiles of residents (6+2 schedule), each session was repeated four times. Topics to date include unconscious bias, motivational interviewing, approach to the patient with limited English proficiency, patient panel review, and social determinants of health and health disparities. Anonymous surveys were administered to residents after each session to evaluate their experience.

RESULTS: To date, 100% (n=42) of our PGY1 residents have participated in our curriculum with an anticipated completion of 5 sessions per trainee by the end of the academic year. The percent of residents indicating they learned something new in the session which they plan to apply to their practice was: 70.59% (12/17) for clinical reasoning and unconscious bias, 72.2% (13/18) for motivational interviewing, 81.25% (13/16) for limited English proficiency, and 76.9% (10/13) for patient panel review.

CONCLUSION: Our longitudinal, equitable patient-centered care conference series successfully captured all PGY1 residents and delivered novel content that residents plan to utilize in their practice. One potential limitation for generalizability of this curriculum is the dedicated time required for implementation from both a faculty and resident scheduling perspective. However, the high-yield applicability of these sessions to all clinical domains should prompt programs to consider such content a priority. Next steps will be to apply the concepts learned in the classroom to clinic-based quality care initiatives beginning in February 2019.

SECTION 8:

Curriculum (UME)

POSTERS 26-29

ABSTRACT #26

STORY TIME/TEEN TALK (ST3): FACILITATING A VOLUNTEER PROGRAM FOR EARLY ENGAGEMENT IN CHILD PSYCHIATRY

AUTHORS: Anna Blazejowskyj, Lodoe Sangmo, Yonis Hassan, Jasmine Tatum, Mitchell Arnovitz, Mary Christopher, Julia Katz, Maya Hubert, Virginia Gao, Caroline Bjorkman, Timothy Rice

PURPOSE: According to the American Academy of Child and Adolescent Psychiatry, there are approximately 8,300 practicing child and adolescent psychiatrists in the US and over 15 million people in need of their services. That's over 1,800 potential patients per doctor. To meet these needs, it is extremely important to find ways to increase recruitment into child and adolescent psychiatry.

One way to increase interest in the field is through programs that provide early clinical exposure to medical students. The initiative being evaluated as part of this research is Story Time/Teen Talk (ST3).ST3 occurs on an inpatient child and adolescent psychiatry unit at Mount Sinai and consists of organized evening readings of children's books (Story Time) and group discussions with adolescents (Teen Talk) under the supervision of a general psychiatry resident from one of Mount Sinai's three main residency programs. Following the activities, students discuss with their supervising resident clinical material pertaining to the youth with whom they worked, including matters of medications, side effects, and clinical benefits.

METHODS: Over a two-year period, between January 1st, 2017 to January 1st, 2019, 28 medical students completed a 15-item questionnaire following their participation to evaluate their experiences on the unit, their outlook on mental health, likelihood of pursuing a career in child and adolescent psychiatry, and perceived benefit on their medical education. Five students who participated within the shorter six-month time period of January 1st, 2017 to June 30th, 2017, were additionally invited to participate in a tape-recorded semi-structured interview. Grounded theory analysis was used to identify themes from these interviews.

RESULTS: Survey analysis revealed significant findings including that 39.3% of respondents indicated that they are more likely to choose a career in child and adolescent psychiatry as a result of their participation, and 7.1% even indicated that their career plans changed as a result of this experience. 85.7% of respondents indicated that their participation increased their understanding of mental illness, and 96.4% of respondents indicated that participation made them more aware of the challenges faced by mental healthcare providers. 64.3% of respondents agreed that clinical experience changed their perception of psychiatry. 89.2% participants surveyed recommend this experience to all students, regardless of specialty interest.

CONCLUSION: The survey data indicate that Mount Sinai medical student engagement in the ST3 programming increases interest in the field of child and adolescent psychiatry as well as several related variables that may increase recruitment into the field. Students reported developing a more developed understanding of the field, greater confidence in their skills in working with child and adolescent populations, and overall more comfort in close relationships with patients in the child and adolescent population.

ABSTRACT #27

MEDICINE AND THE MODERN FAMILY

AUTHORS: Annie Arrighi-Allisan, Camille Van Neste, Marla Allisan, Susan Lerner

PURPOSE: The purpose of this Nexus course was to provide future clinicians with exposure to a range of topics related to family building that are not encompassed by the rigid, "traditional" definitions of the nuclear family (such as adoption, gamete donation, etc.). Motivating this course was the realization that the reality of people's lives might surpass the medical profession's current language and practices for patient-clinician interactions. We aimed to introduce new language, concepts, and empathy for the complexities of the experiences of those with modern families, thus enabling clinicians to provide healthcare that more adequately addresses their needs.

METHODS: We approached experts in each of the relevant areas and generated topic lists that might have relevance to clinical practice or be of personal interest to students. Example topics included: unique challenges faced by same-sex or single parents, integrating adoption-sensitive questions into a family history, medical and psychological implications of conceiving a child via donor gametes, and the ethics of selecting for or avoiding genes via preimplantation genetic testing. We created an anonymous survey that asked attendees to rate the utility of the session(s) for both themselves, personally, and for their future patients. Optional long-form questions allowed attendees to share more unstructured feedback.

RESULTS: 90 students and staff attended at least one session, with 20% attending at least 4 sessions. The majority of attendees (67%) were preclinical medical students, 10% were clinical medical students, 10% were genetic counseling students, and 3% were students in other degree programs. The minimum and maximum numbers of attendees at any given session were 22 and 32, respectively.

100% of survey respondents (25 students) indicated that they believed the course should both continue at Sinai and extend to additional institutions. Participants rated, on a scale of 1 (not helpful at all) to 5 (extremely helpful), how helpful they felt the course would be for their patients. 48% of respondents selected 5, 40% chose 4, 8% indicated 3, and 4% chose 1. When asked how helpful the course was for them personally, 56% chose 5, 28% selected 4, 12% selected 3, and 4% chose 1. Freeform answers included the following themes: expanded awareness of diverse family types and the unique challenges they may face, greater vocabulary and confidence around sensitive topics, and pausing before making assumptions about a patient's genetic background.

CONCLUSION: The vast majority of respondents felt that the course material would serve them both professionally and personally, and that this material merited a larger clinical audience. Though long-term advocacy and an understanding of the nuances of modern families are not ensured by a six-week optional course, integration of these themes into mandatory medical education may help to provide the next generation of clinicians with the tools to make patients feel seen, and treated, in their entirety.

ABSTRACT #28

THE PREDOC PROGRAM: PIPELINE HEALTHCARE APPRENTICESHIP PROGRAM

AUTHORS: Seulah Choi, Rachel M. Salas, Alyssa A. Gamaldo, Roy E. Strowd, Laurence T. Hou, John Shatzer, Keri Bischoff, Charlene E. Gamaldo

PURPOSE: The PreDoc program is a longitudinal apprenticeship aimed at increasing college student interest in pursuing a healthcare career. This program offers the continuity of clinical, research, and educational exposure in academic medicine utilizing a career immersion approach that allows a graduated level of responsibility, experience, and leadership opportunities.

METHODS: Students get an asynchronous curriculum at a teaching institution under the direction of academic physicians committed to boosting the pipeline. Training in critical career development skills including "goal setting," professionalism, communication, and time management are provided to Pre-Docs by their senior peers and program leaders.

RESULTS: Since implementation of the PreDoc program in 2013, 28 students have enrolled in the program. Twenty- three students completed the survey; 100% ranked the program quality as good/ excellent. Students reported more interest in academic medicine (n=19, 83%), neurology (n=18, 78%), and sleep medicine (n=18, 78%). A majority of the students reported that they were extremely likely to pursue a medical career (n=20, 87%). All students have completed or are in the process of completing at least one scholarly product.

CONCLUSION: The PreDoc program has been successful in promoting college student scholarly productivity in healthcare and in garnering student interest in healthcare, particularly in academic medicine.

ABSTRACT #29

THE PRACTICE, ENHANCEMENT, ENGAGEMENT, RESILIENCE, AND SUPPORT (PEERS) CURRICULUM: IMPROVING MEDICAL TRAINEE RESILIENCE AND WELL-BEING

AUTHORS: Jordyn H. Feingold, Anne Hart, Catherine Crawford, Emma Makoba, Murad Khan, Lillian Jin, Isobel Rosenthal, Asher Simon, Deborah Marin, Vansh Sharma

PURPOSE: Physician burnout, a syndrome of emotional exhaustion, depersonalization, loss of meaning and diminished sense of personal accomplishment, is prevalent in the United States. National studies demonstrate a >50% burnout rate among medical students, residents and practicing physicians. Burnout, which begins as early as medical school, has several well-documented consequences including increased medical errors, high turnover of physicians, and increased rates of physician depression and suicide.

METHODS: PEERS is a trainee-led program aimed at cultivating well-being, resilience and community among medical trainees. Sessions are comprised of discussion, mindfulness, and techniques from CBT and positive psychology. Over 9 modules, the curriculum targets each stage of medical education to equip trainees with relevant skills to face challenges and thrive during training. In 2017-2018, the program was piloted in the medical school and psychiatry residency. Groups are comprised of 8 medical students, led by a resident and senior student. 90-minute sessions occur twice per year over 4 years. We are conducting an IRB-exempt longitudinal study of medical students. At the beginning of each academic year, we measure resilience, well-being and burnout using the Connor-Davidson Resilience Scale (CD-RISC), PERMA (Positive emotions, Engagement, Relationships, Meaning, and Accomplishment) Profiler, and the Maslach Burnout Inventory, respectively. We track progress between sessions with the Medical Student Well-Being Index (MSWBI).

RESULTS: Preliminary data suggests that under-represented minority students and women report higher rates of burnout and lower resilience and well-being, and this gap increases over time. [We are presently analyzing the data from the first two years of the program and will have more robust findings to report in the next month].

CONCLUSION: Physician burnout is at least partially attributable to the rigor of medical training. Our program provides learners with tangible skills to face challenges throughout medical training and life, by 1) emphasizing the pursuit of well-being as a clinical skill and prerequisite to high quality patient care, 2) creating an environment for students to connect with their sense of meaning and engagement in medicine, 3) explicitly teaching students basic resilience skills, 4) and fostering a peer-to-peer network of students and student mentors within the ISMMS community. Follow-up data collection is planned, and is necessary to determine the longitudinal effects of our program and other well-being interventions put in place at Mount Sinai.

SECTION 9:

Professional Development I

POSTERS 30-33

ABSTRACT #30

A NOVEL APPROACH TO IMPROVE RESIDENT SCHOLARLY ACTIVITY

AUTHORS: Barbara Deli, Lois Brustman, Carolyn Waldron, David Cole, Peter McGovern

PURPOSE: Over the past decade, scholarly activity has become more defined and outcomes-based. For years, residents have completed research projects that did not always fulfill the ACGME defined categories of publications (with PubMed IDs) or abstracts/presentations/posters (given at international, national, or regional meetings.) After assessing barriers to meaningful research, a formal strategy was developed to tackle obstacles to productive research; 1) support, 2) knowledge and 3) motivation. The objective was to assess if these changes would impact the number of publications and presentations at regional and national meetings.

METHODS: Residents began their research projects in their PGY2 year and received support and guidance from a research support team consisting of a medical editor, statistician and 2 senior faculty mentors. During scheduled, bimonthly, mandatory meetings during protected time, the research support team created individual timelines for project completion and assisted with study design, IRB submission, and data preparation. To improve knowledge, a didactic curriculum (6 lectures) on research and statistical techniques was presented to all of the residents yearly. Clear expectations of submission of the abstracts to selected national/regional meetings and of completion of the projects by PGY3 year of residency to allow time for submission for publication were made. As further motivation, residents were rewarded with financial subsidy to attend national and regional conferences if the projects were accepted for presentation.

RESULTS: In 2016, 50% of resident research projects (3 of 6 projects) were accepted at national and regional meetings. In 2017, 70% (7 of 10 projects) were accepted and in 2018, 75% (3 of 4 projects) were accepted. After instituting a comprehensive didactic, support and reward program, the percentage of scholarly project accepted for presentation increased from 50 to 75%.

CONCLUSION: Implementing a scholarly activity approach that addresses issues of support, motivation and knowledge shows promise to improve quality of research. Further study and expansion of this program is needed to better assess its impact.

ABSTRACT #31

REAL-TIME ASSESSMENT OF RESIDENTS' PERCEPTIONS OF INAPPROPRIATE NEUROLOGY CONSULTS

AUTHORS: Caroline Gentile, Emma Loebel, Charles Sanky, Stephen Krieger

PURPOSE: Consultation, in which one physician helps another by offering their expertise, is an integral component of interdisciplinary patient care. The Accreditation Council of Graduate Medical Education (ACGME) Core Common Program Requirements for Residency include "communicating effectively with physicians, other health professionals, and health-related agencies" and "acting in a consultative role to other physicians and health professionals". Our previous research demonstrated discordant knowledge expectations between neurology and medicine residents, potentially influencing perceptions of consult inappropriateness. In this study, we investigated the perceptions of inappropriate neurology consults between neurology residents (NR) and consulting practitioners (CP) immediately following the consult interaction to gauge the necessity of interventions designed to improve the consult process, resident education, and ultimately, patient care.

METHODS: Investigators were embedded in the Mount Sinai neurology consult service for four weeks in May/June 2018. For each consecutive neurology consult , the NR's real-time attitudes toward the consult were immediately evaluated with a questionnaire using Likert scales. A similar survey was promptly administered to the CP who called the consult. Response scores for each attribute were dichotomized and data were analyzed using correlation analyses and Mann-Whitney U tests in SPSS.

RESULTS: 69 consults were called by 19 departments, most commonly the Emergency Department, Medicine, Obstetrics and Gynecology, Oncology, and Rehabilitation; the most common consults were for seizure, altered mental status, headache, weakness, and dizziness. 67% of consults were called by residents, 22% by non-MDs, 3% by attending physicians, and 1% by fellows. NRs rated consults as significantly less urgent than CPs ($p=0.03$). NRs rated 38% of consults ($n=69$) as less appropriate than CPs ($p=0.084$). When NRs perceived a consult as inappropriate, they felt more resistant ($r=-0.79$). NRs felt more resistant when they thought that the CP could have cared for the patient without the consult ($r=0.79$). NRs felt high resistance for 22% of consults, but expressed high resistance for only 7.2%. CPs rated the resistance they received from NRs as high for just 3.1% of consults.

CONCLUSION: This study demonstrates that NRs have different perceptions of consult inappropriateness and urgency than CPs. Despite these discordances, NRs expressed much less resistance towards inappropriate consults than they felt. This delta can be considered a measure of professionalism in interdisciplinary care, which has been identified by the ACGME as a core aspect of resident education. Our data support the development of educational interventions to help CPs gauge the urgency and appropriateness of a neurology consult, improving the consult process and furthering patient care. Additional analyses will evaluate disease-state and medicolegal contributors to perceived consult inappropriateness.

ABSTRACT #32

PERCEIVED MEDICOLEGAL RISK INFLUENCES NEUROLOGY RESIDENTS' PERCEPTION OF INAPPROPRIATE CONSULTS

AUTHORS: Emma Loebel, Caroline Gentile, Charles Sanky, Stephen Krieger

PURPOSE: Consultation among physicians of different specialties remains vital in delivering effective interdisciplinary patient care. The Accreditation Council of Graduate Medical Education (ACGME) Core Common Program Requirements for Residency highlight the importance of integrative communication and consultation. Management of medicolegal risk remains a persistent influence on medical practice especially in the context of consultation. Few studies have assessed the degree to which perceived medicolegal risk (i.e., liability) influences consultation requests and affects resident education. This study's aim was twofold: to assess how concerns for liability influence neurology resident (NR) perceptions of consult inappropriateness and to explore the need for resident education on proficient handling of consultation.

METHODS: Student investigators were embedded in the neurology consult team at the Mount Sinai Hospital for four weeks in May/June 2018. Following each consecutive neurology consult (n=69), the NRs were asked in real-time to evaluate the appropriateness of the consult and degree to which liability concerns were perceived to influenced it, using Likert scales. A similar survey was promptly administered to the consulting provider (CP) who called the consult. Response scores were dichotomized to indicate smaller vs. greater levels of perceived medicolegal influence. Logistic regression in SAS was used to generate odds ratios.

RESULTS: NRs rated 38% of all consults (n=69) as less appropriate than CPs (p=0.084). NRs felt liability highly influenced the CP's decision to call a consult in 36% of 69 cases. Of these "high liability" consults, NRs considered 76% inappropriate and 100% low urgency. Additionally, NRs felt the CP could provide care without a neurology consult for 92% of cases highly influenced by liability concerns. When NRs thought CPs could provide care without a consult, they were much more likely to deem a consult as high liability (OR=10.811 [CI=3.266;35.787]). NRs reported liability concerns minimally influenced 64% of consults and considered only 27% of these inappropriate.

CONCLUSION: We found that perceived liability risk often impacts the decision to request a neurology consult, even for patients CPs are capable of treating without one. Consults perceived by NRs as high liability are more likely to be regarded as inappropriate compared to those with minimal liability concerns. Further education and guidance on balancing the need to mitigate liability with limited consultation resources could enhance interdepartmental collaboration, reduce excessive healthcare utilization, and improve residents' service-to-education balance.

ABSTRACT #33

THE CREATION OF A COMPREHENSIVE MEASURE OF ACADEMIC ACHIEVEMENT: PART I

AUTHORS: Ilana G. Margulies, Hanzhou Li, Kaitlyn Paine, Peter Taub

PURPOSE: While the advent of the h-index has allowed for a quantitative measure of one's publications and citations, there is no comprehensive measure of academic productivity that takes into account the other notable achievements of an academic physician. Such variables include academic rank, journal editorship, society involvement, among others. Thus, as the first step in creating a novel and comprehensive measure of academic achievement, we sought to investigate the perceived importance of different accomplishments of an academic physician by surveying physicians nationwide and at our own institution.

METHODS: The link to an online cross-sectional survey was distributed to plastic surgeons of different academic levels nationwide and faculty members at our institution from 2016 through 2018. After select demographic questions, respondents were presented with random, unique, binary comparisons of 42 different achievements of an academic physician, and were asked to choose the more important achievement. Respondents were able to complete as many comparisons as they desired until reaching the maximum 1,722. Descriptive statistics of demographics and win rates of each achievement (number of times a variable won / number of times the variable appeared) were reported.

RESULTS: Respondents consisted of 127 unique users comprised of 10 department chairs, 97 senior attendings, and 20 junior attendings. 48% of respondents were plastic surgeons, 57% were fellowship trained, and 75% practiced exclusively in an academic setting. Respondents completed an average of 116 (SD=97.6) comparisons each, generating a total of 14,736 ranked comparisons. Win rates for the 42 variables ranged from 0.9 to 0.1, with the highest win rates attained by dean of a medical school (0.90) and editor of a medical journal (0.88), and the lowest win rates attained by industry spokesperson (0.1) and member of a local medical society (0.1).

CONCLUSION: The survey responses of 127 physicians were used to order 42 different academic achievements by perceived importance using a unique survey methodology that did not require respondents to rank all 42 items. This ranked comparison data will be used to create a novel and comprehensive measure of academic achievement with a variety of potential applications.


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SECTION 10:

Professional Development II

POSTERS 34-38

ABSTRACT #34

WHAT DO EARLY CAREER RESEARCHERS AT MOUNT SINAI NEED? EXPLORING EARLY CAREER RESEARCHERS' LEARNING NEEDS TO DEVELOP AN EMERGING INVESTIGATOR WEBSITE

AUTHORS: Janice Gabrilove, Layla Fattah, Fatima Nabizada-Pace, Inga Peter, Alan Moskowitz

PURPOSE: Early career researchers at Mount Sinai have access to a wide range of resources and support. It can, however, be challenging for new investigators to know where to find information. To address this issue, an Emerging Investigators website was conceived to bring together resources, provide educational support and foster a community of early career investigators at Mount Sinai. In order to ensure this resource effectively meets the needs of this cohort of researchers, a series of focus group interviews were undertaken with early career researchers, which aimed to 1) explore the self-perceived challenges faced by early career researchers (ECRs) 2) explore the self-perceived learning needs of ECRs at Mount Sinai, 3) determine the website content that ECRs would find valuable.

METHODS: A convenience sample of ECRs at Mount Sinai were contacted for participation (N = 20). A total of 13 participants responded and three focus groups were conducted during Spring 2018. Participants were initially asked to consider the challenges that early career researchers face, and which of these challenges could be addressed through education or support. Participants were asked to consider what they wished they knew more about in relation to research, and to discuss the resources or support they thought would help them to meet the learning needs they identified. Finally, participants were asked to rank their top priorities for inclusion in an Emerging Investigators website. Focus group sessions lasted between 1 and 1.5 hours.

RESULTS: Interview data was transcribed and thematic analysis was used to identifying patterns or themes within the data. These themes were categorized as: Mapping the research pathway, Research skills, Personal development, Mentorship, Community of Practice and Opportunities at Mount Sinai. When asked to prioritize topics for inclusion in the website, the pre-doc students selected research skills that included statistics, navigating the IRB, writing and publication, as well as mapping the research landscape at Mount Sinai. Post-docs also selected some research skills such as scientific writing and conference presentation, but also prioritized personal development and "soft skills" such as leadership, management, collaborating with others and finding a work-life balance.

CONCLUSION: The articulated themes have formed the basis for developing resources for the Emerging Investigators website. The prioritization of topics differed between groups, reflecting the different stages and levels of experience of these researchers. The website provides key learning and "top tips" suitable for all levels of early career researchers, but with links to further reading and resources for those at a more advanced level. In addition, the reported need for communication with peers resulted in the addition of further web-based resources such as a discussion forum, a blog with featured research, and a calendar of events targeted specifically at ECRs.

ABSTRACT #35

EXPLORING COMMUNICATION AND COLLABORATION AT THE MOUNT SINAI HEALTH HACKATHON: A SOCIAL NETWORK ANALYSIS (SNA)

AUTHORS: Janice Gabrilove, Layla Fattah, Fay Bradley

PURPOSE: The study aims to (1) investigate the structural patterns of professional communication that exist at the Mount Sinai Health Hackathon (2) explore if and how the professional networks of the participants change after engaging in the Mount Sinai Health Hackathon (3) explore any associations between the characteristics of participants' professional networks and successful innovation development.

METHODS: The recruitment pool consisted of 78 Mount Sinai Health Hackathon (MSHH) 2018 participants. In order to explore patterns of communication between Health Hackathon participants during event, whole network data was collected via post-event survey. Participants were asked to report the nature, frequency and perceived importance of their interaction with other participants.

In order capture any network change in the professional networks of the individual participants, known as "ego networks", participants are asked to complete an SNA ego network survey at time points T1 (pre-event), T2 (post- event) and T3 (six months post-event). Participants are asked to report people they consider important to them in their professional network and record the nature of the communication and the importance of each person to their success.

Data is analyzed using the specialized SNA software, UCiNET, which creates network sociograms to visualize network data. Descriptive statistics are used to report individual-level characteristics of respondents.

RESULTS: 52 of the 78 MSHH participants completed and returned survey data (67% repsonse rate). To describe the structural patterns of communication at each time point, the following network-level indices will be calculated: density (a measure of network cohesion), degree centrality (how many connections the individual has), betweenness centrality (whether the individual provides connections to other people in a network) and closeness centrality (how close the individual is to other people in the network). Network sociograms will be generated to provide a visualization of the network. To explore whether participating in the MSHH increases diversity of a professional network, analysis will focus on whether and how network-level indices change pre- and post- Hackathon. It will also explore any association between network characteristics and project success.

CONCLUSION: Social Network Analysis of the MSHH provides an understanding about the structure of relationships that are formed as a result of participation in this event. Although, the design of this study does not allow for inferences of causality, the SNA approach enables an in-depth exploration of Hackathon participants' professional networks, how these evolve over time and how certain network characteristics may be associated with project success. This information will be used to inform the development, content and delivery of future MSHH initatives.

ABSTRACT #36

DEVELOPING A LEADERSHIP ALUMNI PROGRAM TO FOSTER A CULTURE OF LEADERSHIP AT MOUNT SINAI

AUTHORS: Janice Gabrilove, Layla Fattah, Theresa Mack, Umut Sarpel, Ilse Daehn, Anuradha Lala-Trindade

PURPOSE: Leadership is an essential and recognized team science competency. To support the development of leadership skills at Mount Sinai, the LEAD (Leadership Emerging in Academic Departments) program, launched in 2016, delivers a structured 12-month blended learning program for junior faculty. The program aims to promote personal and professional leadership capacity, skills and behaviors. In its second year, the challenge for the LEAD program leadership is to support alumni in fostering a culture of leadership that extends beyond the 12-month program. In order to promote a leadership community of practice and offer continued support to junior faculty, the LEAD Alumni program aims to bring former LEAD participants together to maintain motivation, share challenges and successes, meet with mentors and role models, and foster an ongoing community of practice that seeks to embed evidenced-based leadership culture at Mount Sinai.

METHODS: The previous two cohorts of LEAD participants were approached to volunteer for the LEAD Alumni Forum working group. Four LEAD alumni came forward to form a self-selected working group. Working with the program leadership, the alumni working group developed an electronic survey to determine interest in an alumni program and the self-perceived learning needs of the LEAD alumni. The survey was distributed to the 24 LEAD 2018 participants, who are comprised of assistant and associate professors from 13 disciplines across 5 Mount Sinai sites.

RESULTS: 21 of the 24 LEAD participants responded to the survey. 90% of respondents reported they were "very interested" in an alumni program, with the remaining 10% reporting they were "interested". The majority of participants (57%) indicated interest in meeting on a monthly basis. Key learning needs identified by respondents were resilience, leadership during transitions, managing team performance, negotiation skills and coaching others. Respondents also expressed an interested in interacting with senior leaders at Mount Sinai, thereby learning from role models within the organization.

CONCLUSION: Survey results demonstrate a considerable interest from participants in the LEAD Alumni program. In response to this, monthly LEAD alumni events will provide the opportunity for junior faculty at Mount Sinai with expertise and a passion for leadership to create a supportive environment that seeks to increase the transfer and utilization of leadership skills in practice. Fostering a community of practice will further the reach of the LEAD program and as the number of LEAD alumni grows, and the Alumni Forum may provide the supportive environment that allows these individuals to impact leadership culture.

ABSTRACT #37

COMMUNICATION IN SCIENCE: A SUMMER WORKSHOP PROGRAM AT MOUNT SINAI

AUTHORS: Janice Gabrilove, Layla Fattah

PURPOSE: In an effort the increase awareness and enhance knowledge and skills in relation to communication in science at Mount Sinai, the Communication in Science summer workshop series aimed to provide an accessible, workforce-wide lecture series to promote key concepts and skills related to communicating science. Delivered by faculty and invited speakers, a series of seven workshops delivered over a 4-week period covered topics such as communication in teams, storytelling and TED talk principles, and community engagement. Evaluation of the workshop series aimed to determine participant satisfaction and self-perceived changes in knowledge and skills in relation to science communication.

METHODS: A total of 375 participants registered to attend the workshop series from a range of backgrounds including post-docs, faculty, residents, staff and students at Mount Sinai. Attendance at the workshops ranged from a high of 119 and a low of 33 participants, with as many as 41% of attendees joining the session via live-streaming. Participants were emailed an online survey at the end of the workshop series.

RESULTS: A total of 35 participants responded to the survey. For each workshop, participants were asked to rate satisfaction criteria related to content, gained knowledge and skills, presentation style and whether they found the session of value, using a Likert scale from 1 - 5 (1 = strongly disagree, 5 = strongly agree).

Mean responses to the survey questions were:
This content is important to my work = 4.09 (range 3.77 – 4.45)
This session increased my knowledge or skills 4.03 (range 3.56- 4.62)
The presenters delivered this content clearly = 4.16 (range 3.78 – 4.67)
Overall I found this session valuable = 4.13 (3.78 – 4.61)

Participants were also asked to provide an overall rating for the summer workshop series on a scale of 1 to 10 (1 = poor, 10 = excellent). The mean response was 8.36, indicating a high level of satisfaction with the program. Qualitative feedback indicated that the sessions raised awareness of science communication, with one participant reporting that “these sessions inspired me to think differently, and in a way that can potentially allow me to communicate with the non-science community”.

CONCLUSION: The high number of registrants for this summer workshop series indicates a perceived need for education and training on Communication in Science at Mount Sinai. Sessions that focused on TED talk principles and storytelling in science were particularly well attended and well-reviewed, suggesting a particular interested in these topics. There was, however, a discrepancy between registration and attendance numbers. One explanation is that recording and posting the sessions on YouTube allowed participants to review content asynchronously at a time and location convenient to them, which may have deterred people from attending in person. Following the popularity of this program, future plans are underway to provide an ongoing program of learning in relation to Communication in Science.

ABSTRACT #38

AN ELECTRONIC INDIVIDUAL DEVELOPMENT PLAN ORIENTS STUDENTS TO SETTING AND ACHIEVING GOALS AND INFORMS NEEDS FOR PROGRAMMATIC IMPROVEMENT

AUTHORS: Talia H. Swartz, Bianca Taylor, Benjamin K. Chen, Margaret H. Baron

PURPOSE: The main objective of the Individual Development Plan is to provide students with a framework to navigate through the educational system and allow them to discuss their short terms and long-term goals and objectives with mentors and advisors. The data collected from the responses can be used to glean information about student plans, success, and areas for programmatic improvement.

METHODS: An Individual Development Plan was created through an electronic form accessible through a hyperlink which was distributed to all 95 students in the MD/PhD program, a dual degree program in which students complete their preclinical medical education (MD1-2), followed by their PhD years in which they complete a doctoral dissertation (~4 years, MP1-MP4+), and then return to medical school to complete their clinical training (MD3-4). All students are required to complete this form and then revise it on an annual basis between February and May. The students submit the form electronically and are then sent an electronic report which they are asked to discuss with their mentor and then submit the signed form. Data from the form are compiled and analyzed by program leadership annually. The data presented here represent the compilation of responses from 2018.

RESULTS: By June of 2018, 100% (95/95) students from all phases of the program completed the Individual Development Plan. Ninety-seven percent (92/95) of respondents report satisfaction with progress and 97% (92/95) report satisfaction with mentoring they received over the past year. Fifty five of the 95 students received an honor or award. Ninety-seven percent (31/32) of students early in the program intend to submit a Predoctoral Fellowship application to the NIH. Sixty-three percent (40/63) of students established in their PhD submitted an application, and 50% (20/40) of those were awarded the fellowship. Among students participating in clinical exposures, 49% (39/79) participated in the student-run East Harlem Health Outreach Program (EHHOP). All (92/92) respondents intend to pursue a residency. In addition to residency, students intend to pursue: a post-doctoral fellowship, 25% (23/92), a career in industry, 13% (12/92), or some other training, 8% (9/92). In considering goals for the upcoming year, students were most interested in improving time management (39), clinical skills (32), study skills (26), networking (24), work-life balance (7), and knowledge base (5). An important caveat is that the data collection is not confidential and therefore responses may represent filtered concerns or perceptions.

CONCLUSION: The Individual Development Plan provides a framework for tracking students, reviewing progress, formulating long term and short-term goals, and informing mentors and program leadership of needs for future program development. The observations here will help provide future directions for building programs to develop skillsets that students feel will help them in their career development.

SECTION 11:

Quality Improvement I

POSTERS 39-42

ABSTRACT #39

TRANSFORMING HOSPITAL BIOETHICS: AN INNOVATIVE APPROACH TO CREATING A MEANINGFUL INSTITUTIONAL ETHICS PROGRAM

AUTHORS: Mirna Mohanraj, Janet Shapiro

PURPOSE: Hospital Ethics Committees (HECs) have developed to meet the policy, education and consultation needs of the institution. HECs are required by accreditation agencies, yet there is no consensus on best practices. The majority of HECs focus exclusively on bioethics consultation. We describe the Mount Sinai St. Luke's-West Hospitals HEC's recent evolution from consultative service to robust Ethics Program.

METHODS: We reviewed the predominantly normative literature addressing the structure, function, and activities of HECs in the United States. We assessed our HEC structure and function under the following categories: ethics consultative services, educational activities, research, attention to moral climate, policy/system change. The co-chairs of the HEC developed a strategic plan to improve and expand services across all activity categories.

RESULTS: At baseline, our HEC was composed of 4 physician consultants, faculty and trainee physicians, nursing, pastoral care, palliative care, and legal. Consultations were accepted from anyone in the community, but the process was poorly defined. Consultations were conducted at bedside and discussed with a co-consultant. The full committee was assembled ad hoc for complex ethics consultations. 1-2 educational seminars were presented each year. No formal activities were conducted in the areas of research, moral climate, or policy/system change. Post-audit, we commenced the following interventions:

STRUCTURE AND FUNCTION: We expanded committee membership by welcoming a broad range of professionals. Bimonthly committee meetings now include evidence-based discussion of cases, literature review, and an HEC activity update.

CONSULTATION: Physician consultants are now identified on a publicly-available electronic call schedule. New consultations are communicated via an e-distribution list. Non-physician committee members are invited to join real- time consultations via an encrypted group messaging application. Education: In addition to, bimonthly educational activities are presented to varied audiences throughout the academic community.

RESEARCH: A Bioethics Database was developed to track consultation characteristics, recommendations, outcomes, committee involvement, and time investment.

MORAL CLIMATE: The described interventions have raised our profile such that trainees, faculty, and staff feel more empowered to engage in discussion of ethical issues. Additionally, a biweekly 'Reflections Rounds' in the Medical Intensive Care Unit organizes multidisciplinary team members to discuss ethical dilemmas and issues of moral distress.

POLICY/SYSTEM CHANGE: A bimonthly e-newsletter apprises the community of HEC activities. Our HEC models and shares best practices with other HECs in our health system.

Conclusion: HECs must evolve to meet the increasingly complex bioethical and moral challenges in hospital communities. We describe an innovative and feasible model to transform a bioethics consultation service into a meaningful institutional Ethics Program.

ABSTRACT #40

PATIENT PARTICIPATION IS DETERMINED BY REFERRAL SOURCE IN AN INTENSIVE DIABETES MANAGEMENT PROGRAM

AUTHORS: Bryan S. Blase, Elaine Galan, Victoria Abram, David Lam, Daniel Donovan, Carol Levy, Grenye O'Mally

PURPOSE: The HAC program was created for patients with high HbA1C values and consists of frequent visits, intensive pharmacologic management, and patient education. In this retrospective study, our primary objective was to determine if there are patient characteristics associated with participation in the program. We hypothesized that younger patients with shorter disease duration and lower HbA1C values would have higher rates of participation.

METHODS: The patients we evaluated were scheduled to begin the program between March and November 2018. Data regarding age, ethnicity, patient reported disease duration, HbA1C, and referral source were collected. We compared patients who participated in the program (Participants) and those who missed their first appointment or only attended one appointment (Non-participants). All Participants attended at least 2 appointments. A total of 30 patients were included, 19 patients in the Participant group and 11 patients in the Non-participant group.

RESULTS: The Participant group had an average pre-enrollment HbA1C of 11.8% (8.7%-15.5%); average patient reported disease duration of 16.9 years (0.5-55 years) and average age of 55 years (32-78 years). 52.6% of patients in the Participant group were referred from an outpatient endocrinology clinic, 26.3 % were referred from an inpatient endocrine service and 21.0% were referred from a primary care setting. The Non-participant group had an average pre-enrollment HbA1C of 12.5% (10.2% to 14.6%); average patient reported disease duration of 13.5 years (5-35 years) and average age of 53 years (32-65 years). 45.5% of patients in the Non-participant group were referred from an outpatient endocrinology clinic, 9.1% were referred from an inpatient medicine service and 45.5% were referred from a primary care setting. There were 10 patients in the Participant group and 7 patients in the Non-participant group who had an HbA1C drawn 3 months after their initial enrollment. The Participant group's HbA1C had a significant reduction to 8.6% (p=0.0017). The average HbA1C in the Non-participant group did not change after 3 months and was 12.1% (9.3-14.0)

CONCLUSION: Our program of intensive diabetes management, similar to what has been demonstrated in other studies, improved the glycemic outcomes in enrolled patients. In our HAC program, age, disease duration, and baseline HbA1C were not determinants of participation or improvement in glycemic control. Referrals from an endocrinology service were associated with participation. Referral from an outpatient setting was also associated with higher rates or participation in both groups. Further studies to understand the impact of provider-patient relationships may help to optimize patient engagement in intensive diabetes management programs.

ABSTRACT #41

DEBRIEFING IMPLEMENTATION PROGRAM IN THE PEDIATRIC INTENSIVE CARE UNIT

AUTHORS: Caroline Black, Christopher Strother, Iris Mandell, Jennifer Kero, Lauren Zinns

PURPOSE: Clinical event debriefing (CED) is a brief discussion that occurs after a patient event (resuscitation or procedure). CED allows teams to discuss the case, what went well, identify areas for improvement, promote communication and team performance. There are many challenges to implementing CEDs, such as unpredictability of when events occur and finding time to conduct them. Our objective is to assess change in perception of team performance following implementation of a CED curriculum in the pediatric intensive care unit (PICU). Secondary goals were to assess use of early CED ("hot debriefs"), nursing involvement and comfort level in leading CEDs.

METHODS: A prospective quality improvement study was conducted in the PICU of a large urban center from September 2017 to October 2018. Participants included PICU faculty and nurses. Debriefing champions (1 attending, 2 nurses) underwent an 8-hour course of both lectures and simulation. The remaining faculty and 23 nurses underwent shorter training sessions. An anonymous, pre-survey was distributed prior to CED curriculum implementation to all attendings and a convenience sample of nurses. Following completion of the study, an anonymous post-survey was distributed. Surveys included TeamSTEPPS Teamwork Perceptions Questionnaire (T- TPQ).

RESULTS: A total of 81 surveys were included in analysis; 41 in the nursing pre-implementation group, 26 in the nursing post-implementation group and 7 in both the attending pre- and post-implementation group. Nurses reported increased use of CED from 42% a quarter of the time to 53% all the time. CED occurrence immediately after critical events improved from 22% to 35%. The majority of CEDs occurred within 6 hours. Faculty led CEDs increased from 85% to 100%. In the 5 teamwork domains of T-TPQ, nursing responses were generally positive with largest improvement in leadership (pre-implementation mean 24.2, SD 6.03; post-implementation mean 28.4, SD 5.99) and situation monitoring (mean 26.7, SD 3.49; mean 27.8, SD 4.06). Attending responses showed no significant change in any domain.

CONCLUSION: Following implementation of the debriefing curriculum, CEDs happened earlier and more frequently than prior. Perceptions of teamwork remained unchanged among attendings but improved among nurses.

ABSTRACT #42

OPHTHALMOLOGY RESIDENT EXPERIENCE WITH COMPLEX CATARACT SURGERY AT A VA HOSPITAL OVER 10 YEARS

AUTHORS: Colleen Maturana, Nisha Chadha, Paul Lee

PURPOSE: To evaluate the third year resident experience with complex cataract surgery at a VA medical center, where approximately 50% of their experience is gained.

METHODS: A chart review of resident cataract surgeries from July 2007 through June 2017 at James J. Peters VA Medical Center was performed. Surgeries were categorized by CPT code, with 66984 indicating routine cataract surgery and 66982 indicating complex cataract surgery. Correct categorization was confirmed by review of the operative report and reason for complex categorization was recorded, as well as the use and type of non-standard device or technique. Routine cases that had complications requiring non-standard devices or techniques, such as posterior capsule rupture requiring anterior vitrectomy, were excluded.

RESULTS: 2429 routine and 114 complex cataract surgeries were performed by 40 different residents from one residency program over a 10 year period at the James J. Peters VA Hospital. In total 4.5% of all cataract surgeries over the 10 year period were complex. Average cases per resident were 60 routine (range 28-101) and 2 complex (range 0 to 10) during the three month rotation in their third year of residency. Reasons for complex categorization included intraoperative floppy iris syndrome/small pupil (76.3%), zonular instability (9.6%), mature cataract (7%), posterior synechiae (7.8%), posterior capsular plaque (1.8%). Non-standard techniques/devices included: iris hooks (65.3%), Malyugin ring (8.5%), extracapsular cataract extraction (6.8%), synechiolysis (7.6%), capsular tension ring (9.3%), mechanical iris dilation (0.8%), primary posterior continuous curvilinear capsulorhexis (1.7%).

CONCLUSION: Education in cataract surgery should extend beyond achieving minimums to focus on variety and complexity in order to optimize training. Our study shows that there is potential for performing complex cataract surgery as third year residents at the VA hospital, however the experience seems inconsistent between residents and remains limited. These results reflect only cataract cases that are coded as complex, thus is it possible that residents had more experience with non-standard devices and techniques during routine cataract cases that had a complication. We believe that distinct training in non-standard devices and techniques should be required by the ACGME to ensure residents are graduating with the skills necessary to be competent surgeons. Consideration should be given to adding complex cataract surgery, along with a minimum required experience, to the ACGME graduation requirements.

SECTION 12:

Quality Improvement II

POSTERS 43-45

ABSTRACT #43

USING THE QUALITY IMPROVEMENT APPROACH TO IMPROVING FALLS EVALUATION AND DOCUMENTATION

AUTHORS: Nami Safai Haeri, Erika Diaz Narvaez, Stephanie Le, Katherine Roza, Christine Chang, Ravishankar Ramaswamy

PURPOSE: Falls and fall-related injuries lead to increased morbidity and functional dependence in older adults. Increasing amount of evidence suggests a multidisciplinary falls management strategy including physical therapy and exercise programs, medication reconciliation, vision and podiatry assessment, 25-OH Vitamin D repletion, postural hypotension and cognitive evaluation can reduce falls incidence in this population. At the Mount Sinai Hospital geriatric outpatient clinic, we observed poor rates of a standardized approach to patients with falls. In this QI project, we aimed to identify barriers to a falls work up and the implementation of an intervention to improve this process.

METHODS: Prior to the study, a literature review was conducted by searching the latest evidence-based approach to patients with a history of falls. A retrospective chart review was performed by fellows on their patients with falls to document the overall approach to these patients over a 6 months period. Using the process map and root cause analysis tools, lack of standardization and education were identified as the major contributing causes for incomplete falls work up. Based on the identified gaps, we created and implemented a standardized order set in the electronic medical record for patients with falls. Educational and instructional lectures were delivered to providers on the use of the order set. A pre and post intervention chart review of 25 patients with positive falls history was performed.

RESULTS: After pre and post intervention chart review the percentage of improvement in each of the falls evaluation domains was recorded as follows. Cognitive evaluation (8%), medication reconciliation (4%), gait evaluation (16%), DME evaluation (32%), physical therapy referral (0%), 25-OH vitamin D level (12%), orthostatic hypotension evaluation (16%), ophthalmology evaluation (12%) and podiatry evaluation (4%).

CONCLUSION: Our project demonstrated that the implementation of a standardized protocol for falls management coupled with an educational intervention improved the overall process of falls management. Future directions include further efforts towards improving ease of use of this order set, as well as improving awareness among providers to increase its use.

ABSTRACT #44

'REACH-IN': A STUDENT-DRIVEN INITIATIVE TO CONFRONT THE OPIOID EPIDEMIC

AUTHORS: Leeza Hirt, Matthew Fine, Dillan Villavasinas, Reema Navalurkar, Benjamin Shuham, Trevor Lee, Linda Wang, Michael Herscher

PURPOSE: Persons with opioid use disorder (OUD) represent an estimated 4¬-11% of hospitalized patients and are increasingly admitted for opioid related complications. Medical students may be well positioned to have a significant role in coordinating treatment for patients with OUD. Although teaching hospitals represent only 5% of America's medical centers, approximately 61% of emergency department discharges for substance related disorders in 2014 were from these institutions. In light of these data, the AAMC has encouraged medical schools to incorporate pain, substance use, and addiction training at all levels of medical education.

This initiative educates medical student volunteers to identify hospitalized patients with OUD, connect them with physicians who will initiate buprenorphine, and facilitate their transition to outpatient care.

METHODS: We identified hospitalized patients with OUD who were not already engaged in treatment in two ways: 1) Four first and second year medical students screened a daily electronic report which captured all new admissions or emergency department visits whose medical chart suggested recent opioid use and 2) hospital staff directly referred patients. Identified patients were evaluated for buprenorphine eligibility in person by physicians and students and appropriate candidates were started on buprenorphine and titrated to a stable dose. Prior to discharge, patients were referred to REACH, Mount Sinai's clinic for persons who use alcohol and other drugs, for outpatient care.

RESULTS: From July 30, 2018 to March 12, 2019, we screened 2011 encounters, 1966 (97.8%) of which were identified via the report, with the remaining 45 (2.2%) via direct referrals from clinicians. Fifty-seven (2.8%) patients were evaluated, 15 (26.3%) of whom were started on buprenorphine in the hospital. Of the 42 not started on buprenorphine, 39 (68.4%) were referred to REACH or another program for opioid addiction treatment, where 4 eventually started buprenorphine at REACH.

CONCLUSION: As hospitals see increasing numbers of opioid ¬related admissions, medical students can play a key role in identifying patients with OUD, initiating buprenorphine, and facilitating linkage to outpatient treatment. Through this program, medical students learn about treatment options for opioid use disorder and how to care for these patients without stigma. Inpatient hospitalizations are a 'reachable moment' for persons with OUD and an opportunity to empower medical students to care for this population.

Association of American Medical Colleges. (2019, February 25). Efforts to Respond to the Opioid Epidemic Across the Medical Education Continuum. Retrieved from https://news.aamc.org/for-the-media/article/medical-schools-address-opioid-epidemic/

Dashoff, Jared. (2017, October 17). Teaching Hospitals, Communities are Working to Get to the Root of Substance Use Disorders. Retrieved from https://news.aamc.org/patient-care/article/root-teaching-hospitals-substance-use/

ABSTRACT #45

COLLECTING BIRD'S NEST DRAWINGS FROM PSYCHIATRIC INPATIENT YOUTHS AS A DIAGNOSTIC AID IN ACUTE CARE

AUTHORS: Yonis Hassan, Elyana Feldman, Hillary Rieger, Jasmine Tatum, Mitchell Arnovitz, Maya Hubert, Ashley Sterchele, Timothy Rice

PURPOSE: Clinical researchers have developed evidence-based systematic protocols for use in assessing projective drawing tests completed by youths in psychiatric care. Despite its availability, such protocols are used in clinical practice. We aim to conduct research that will inform the use of these protocols in clinical care. Specifically, we want to investigate the predictive capability of projective drawing tests' in informing neurobiological and psychopharmacological acute care decisions.

METHODS: Trainees administer projective drawing tests to patients on Mount Sinai Health System Child/Adolescent Inpatient Psychiatric Unit as part of clinical care. The drawing prompt given to participants will simply be to "Draw a Bird's Nest". Trainees later evaluate their experiences collecting the drawings. Blinded trainees will then use the form created by Art Therapist Donna Kaiser, PhD that she made for assessing attachment security from children's bird's nest drawings. We will use Kappa for inter-rater reliability and Pearson's R to correlate drawing scores and clinical decisions including psychopharmacological choice, rate of oral and intramuscular agitation pro re nata (PRN) medication administration, and rate of seclusion and restraints. Data analysis will search for any trends at a level of statistical significance.

RESULTS: The drawings have been scored and the statistical analysis has begun and we anticipate completing this portion within the next couple of weeks.

CONCLUSION: Over the course of this project, we have concluded that it is feasible to incorporate systematic evidence- based protocols for assessing children's projective drawing tests during inpatient acute care, based on the trainees' feedback regarding the process of administering these tests. After the statistical analysis is complete, we will be able to conclude whether or not such tests can be useful in predicting neurobiological and psychopharmacological agents used during the course of their inpatient stay and once they are discharged.

SECTION 13:

Simulation

POSTERS 46-49

ABSTRACT #46

USING SIMULATION TO IMPROVE MEDICAL STUDENT KNOWLEDGE AND COMFORT IN EARLY MANAGEMENT OF ACUTE STROKE

AUTHORS: Alana Kornspun, Gurmeen Kaur, Rajeev Motiwala, Michelle Fabian, Laura Stein

PURPOSE: Given the narrow time window, high acuity, and growing complexity, medical student experience with early management of acute stroke (EMAS) is often limited. However, all medical students need experience recognizing and treating acute stroke regardless of their eventual specialty. Simulation-based education has been demonstrated to improve knowledge acquisition without compromising patient safety. We utilized simulation to improve subjective and objective measures of medical student performance in EMAS.

METHODS: In the 2017-2018 academic year, 104 third year medical students participated in stroke code simulation during the neurology clerkship. Stroke fellows led groups of ten students through two cases: right M1 occlusion requiring intravenous alteplase (IV tPA) and mechanical thrombectomy (MT) and left thalamic intracerebral hemorrhage complicated by status epilepticus. In each case, students identified and triaged stroke syndromes, performed the NIH Stroke Scale, interpreted CT and CTA images, and formulated treatment plans utilizing IV tPA and MT as well as blood pressure and antiepileptic medications. All participants completed pre- and post-simulation tests targeting clinical knowledge of EMAS (score range 0-7). Additionally, 45 students completed an anonymous post- simulation survey on subjective feelings of confidence managing acute stroke and seizure (Likert scale of 1-5).

RESULTS: Mean EMAS test score improved from 4.85 (SEM 0.089) pre-simulation to 5.25 (SEM 0.101) post-simulation ($p<0.01$). Students demonstrated significant improvement on questions assessing the role of supplemental oxygen in EMAS ($p<0.01$) and lacunar stroke syndromes ($p<0.05$). Subjectively, 77.8% of participants reported that simulation was the best form of acute stroke instruction they received, and 73.4% agreed or strongly agreed that the simulation improved their level of comfort with EMAS.

CONCLUSION: Simulation can improve medical student knowledge and level of comfort with EMAS. All medical school graduates should be trained to recognize signs and initiate management of acute stroke.

ABSTRACT #47

IN SITU SIMULATION AND NOVEL USE OF A WORKLOAD INDEX AS EDUCATIONAL NEEDS ASSESSMENT DURING CARDIAC ARREST

AUTHORS: Alexander Meshel, Lorraine Boehm, Rachel Caroll-Bennett, Barbara Dilos, Mamie McIndoe, Suzanne Bentley

PURPOSE: Current educational methods for cardiac life support in obstetrics and pediatrics at Elmhurst hospital do not incorporate simulation technology, a tool shown to enhance team performance and improve patient outcomes. Simulation has been shown to help identify latent safety threats, evaluate adherence to established cardiac arrest guidelines, and assess leadership and teamwork with the goal of improving safety and health outcomes. The National Aeronautics and Space Administration-Task Load Index (NASA-TLX) is a multidimensional assessment tool that rates perceived workload in order to assess a task, system, or team's effectiveness. It assesses workload on six separate domains: mental demand, physical demand, temporal demand, performance, effort, and frustration. The NASA-TLX is a strong tool for reporting perceptions of workload. We hypothesize that in situ simulation can be utilized for provider self-reflection and assessment of individual workloads, in order to elucidate patterns of workload strain and inform educational modalities for future educational intervention.

METHODS: Cardiac arrest in situ simulations performed in obstetrics and pediatrics were conducted followed by formal debriefing session. All participants completed the NASA-TLX to measure their workload during the simulation case. Preliminary results were analyzed with focus on discrepancies on workload scores in totality and across the 6 subdomains between specialty, provider type (e.g. doctor vs nurse, leader vs team members), and will be analyzed based on prior experience on cardiac arrest team.

RESULTS: The average NASA-TLX workload scores (maximum score of 20) for doctors were higher than those for nurses (16.42, 12.95, respectively), and doctors also rated their frustration level during the simulation to be higher compared to nurses (16.42, 9.75). Interestingly, nurses and residents rated their effort higher than attending physicians during the simulation (12.19, 11.33, 8.0). Of note, the average scores for those participating in their first simulation across specialties was higher compared to providers with previous simulation experience (15.72, 11.86). Though the current small sample size prevents statistical significance in these findings, they point to trends which identify areas to which educational intervention may be targeted.

CONCLUSION: Simulation is a valuable educational tool in many aspects. It provides an avenue for practice and quantifiable performance assessment, which may be used to intervene in specific areas for future improvement. In addition to cardiac arrest response performance, it provides information used to identify latent safety threats and determine how individual workload plays a role in the relationship between leadership, teamwork, and communication. The findings of this simulation study will be used to stage educational interventions aimed at addressing latent safety threats and improving team dynamics with the goal of improving patient outcomes for victims of cardiac arrest.

ABSTRACT #48

KNOWLEDGE RETENTION FOLLOWING SIMULATED CRISIS: DOES INDEPENDENT PRACTICE OR SIMULATED MORTALITY MATTER MORE?

AUTHORS: Garrett W. Burnett, Andrew Goldberg, Samuel Demaria Jr., Adam Levine, Daniel Katz

PURPOSE: Simulation is an important component of post-graduate medical education, but optimal parameters for simulation are not known. Managing simulations independently and allowing simulated morbidity and mortality has been shown to improve follow-up performance in simulation. We hypothesize that allowing simulated mortality has a greater effect in improving performance in follow-up simulations when compared to independent practice.

METHODS: Using a randomized, controlled, observer-blinded design, 48 first-year residents were exposed to a hyperkalemia scenario. Subjects were divided into two groups (n=24) which allowed for independent practice or support from an attending physician. Each of these groups were then subdivided into two groups (n=12) which allowed for simulated mortality or did not. All groups received a standardized debrief following their simulation. Six months later residents returned to manage a different hyperkalemia scenario independently with potential simulated mortality. The primary outcome was total treatment score while secondary outcomes included subjects' time to request diagnostic information, time to treatment, and mortality rate.

RESULTS: Subject demographics were not statistically different among the cohorts. The independent practice-mortality possible group had the highest total treatment score (p=0.004), fastest time to treatment (p=0.009), and lowest mortality rate (p=0.002) when compared to all groups. Two-way ANOVA and least square means were calculated for each combination of variables. The overall practice effect was contrasted to the potential for mortality and was deemed to be insignificant, however their interaction effect (p=0.003) was significant and produced the best results.

CONCLUSION: Independence and the potential for simulated mortality have a greater impact on performance in follow- up simulations when combined than either factor alone. No significant difference was found when independence was compared to potential for simulated mortality. Future simulation education should utilize independence and potential for simulated mortality to improve knowledge retention.

ABSTRACT #49

NOVEL EDUCATIONAL NEEDS ASSESSMENT UTILIZING IN SITU CODE TEAM SIMULATION LATENT SAFETY THREAT ANALYSIS

AUTHORS: Suzanne Bentley, Lorraine Boehm, Julia LaMonica, Barbara Dilos, Tania Lopez, Mamie McIndoe, Rachel Carroll-Bennett, Alexander Meshel, Alfredo Astua, Ariella Barhen, Akif Qureshi, Andrew Ditchik, Lillian Wong, Colleen Smith

PURPOSE: The complexity of cardiac arrest (code) resuscitation (e.g. varied in-hospital locations, differing team composition, differing supply locations) requires optimized teamwork for safe and effective patient care. Knowledge and clinical experience alone do not translate to effective teamwork without deliberate practice and specific team training, such as that afforded by in situ simulation, an educational modality that can also "test" clinical system and identify latent safety threats (LSTs). LSTs may have a significant impact on patient safety and the objectives of this initiative are to utilize impromptu, in situ, simulation to specifically evaluate code teams and analyze LST as a needs assessment for future code team education.

METHODS: Simulations were performed in situ around Elmhurst Hospital with multidisciplinary code teams, officially activated and responding, as if to real code event. Team performance was scored on previously validated Team Performance Observation Tool (TPOT) and adherence to ACLS/ PALS guidelines. Participants and facilitators identified LSTs during standardized post-simulation debriefings and classified LSTs into equipment, medication, resource/system, or technical skill.

RESULTS: Training: 41 in situ code simulations with 200 participants: 20 ED, 11 pediatrics, 5 L&D, 2 Behavioral Health, 1 in Endoscopy, Catheterization Lab, and MICU. Team Performance Scores: Teams rated on Team Performance Observation Tool (TPOT, Likert scale of 1= very poor to 5= excellent). Pediatrics, L&D and medicine teams had average scores < 3 on all categories; no team scored >4. Trends in improvement noted in subsequent simulations.

LATENT SAFETY THREATS: Hundreds of areas of opportunity for improvement were identified by participants, observers and facilitators with emergence of themes. LSTs were identified and reviewed to remove redundancies with 46 unique safety threats: 18 equipment, 2 medication, 15 resource/system, and 11 technical skill threats. The top 3 areas discussed include deficits in code leadership, team role designations, and familiarity with location and use of code equipment/resources.

CONCLUSION: Cardiac arrest care requires well executed teamwork and poses major threats to patient safety and outcomes. In situ code team simulation format offers a novel way to both assess and improve code teams and code team education through analysis of performance and issues in the actual clinical environment. TPOT scores, identified areas of deficiencies, and assessment of LSTs offer great insights into high yield target areas of remediation and future educational topics. They provide opportunity for tailored training and expanded future interventions. Many LSTs were identified across categories with major themes emerging as described above. In conclusion, knowledge and clinical experience do not automatically lead to high performance code teams. In situ simulation affords high yield clinical systems testing leading to maximized team education.

Thank you for attending the Sixteenth Annual IME Education Research Day!

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