

We anticipate this to not include every patient as there will need to be adequate time between the scheduling of the procedure and the procedure start time to be able to create a 3D model. This will make it impossible to include every patient. Our first prospective case was 11/12/20. RESULTS/ANTICIPATED RESULTS: At the time of submission we have very limited data and cannot confidently make a statement regarding results. We anticipate to measure a reduced time to procedural completion, and as a result, decreased radiation exposure, decreased contrast dosage, and decreased fluoroscopy time in the cases that included a 3D printed model in the planning of the procedures when compared to the procedures that did not include a model. DISCUSSION/SIGNIFICANCE OF FINDINGS: Few hospitals are using 3D printing as a regular tool that physicians can access as a part of their procedure preparation. If we are able to measure a significant impact on the efficiency and safety of procedures in interventional radiology, a much more robust argument can be made for including this technique in procedure planning with regularity.

Team Science

11039

Indiana CTSI High-School STEM Summer Research Program: Future opportunities from a 2020 virtual program

Elmer Sanders¹, Leigh-Ann Cruz², Emily Speidell³, Rose Schnabel⁴, Adhitya Balaji⁴, Elise Hogarth⁵, Jade Miller⁶, Sofia Vaides⁷ and Matthew R. Allen¹

¹Indiana University School of Medicine, ²Riverside High School, ³Decatur Central High School, ⁴Indiana University, ⁵Purdue University, ⁶University of Alabama and ⁷Indiana University, Purdue University, of Indianapolis

ABSTRACT IMPACT: o The Indiana Clinical and Translational Sciences Institute K-12 STEM Outreach Program's pivoted to a virtual program in summer 2020 which yielded novel approaches that could be retained in future years to extend the reach/impact of our pipeline program. OBJECTIVES/GOALS: o Provide students with a meaningful and safe research experience during the COVID Pandemic. o Develop new modules and approaches that could be delivered virtually. o Engage students from communities that were not possible in previous years when in person meetings were required. METHODS/STUDY POPULATION: o The program has historically supported over 100 high school students per year in a summer research internship for the last 5 years. Students are placed with academic research mentors in various Schools and Departments across the IUPUI campus, and also with industry laboratories. o COVID-related restrictions required development of 100% virtual program. Key aspects of the virtual program included: cohort-based research mentor assignments with 1-4 mentees matched per research mentor, research projects that could be conducted virtually, heavy engagement of high-school teachers to facilitate the research experience with cohorts of mentees, a more rigorous virtual seminar series that included new modules such as COVID-specific programming and thus enhancing public education about COVID. RESULTS/ANTICIPATED RESULTS: o The program served 130 students in summer 2020. o We were able to recruit new faculty and industry mentors involved in data science research. As a result, we have now increased our mentor pool to serve more

students in the future. o Because student participation was virtual, we were able to accept students from further distances (up to 120 miles away) across the state. We were also able to accept local economically disadvantaged students that may have not been able to participate because of lack of reliable transportation. o A positive unanticipated outcome was that mentees relationships with the mentors was established virtually thus increasing the potential for students to remain engaged in their research. DISCUSSION/SIGNIFICANCE OF FINDINGS: o Adapting to a virtual platform provided research experience to high school students during a time when traditional approaches were not possible. Given some research experiences do not require in-person activities, this newly established model could be used moving forward to allow more statewide engagement in research experiences.

30315

Successes in the COVID-19 Era: Novel Peer-Mentoring Series for Junior and Mid-Career Academic Faculty Across a University Campus

Lauren Chernick, MD, MSc, Teresa Lee, MD, MS, Stephanie Lovinsky-Desir, MS, MS, Gisette Reyes-Soffer, MD, Marisa Spann, PhD, MPH, Jennifer Woo Baidal, MD, MPH, Anne L. Taylor, MD, Daichi Shimbo, MD, Clara Lapiner, BA, MPH and Brett Anderson, MD, MBA, MS Columbia University Irving Medical Center

ABSTRACT IMPACT: Partnering with academic offices to promote peer-mentoring in a virtual format is feasible, novel, and well-received across a major academic campus. Particularly during a pandemic, the success of this programmatic effort highlights the continued need for peer-to-peer support. OBJECTIVES/GOALS: To identify feasibility and key lessons learned from the planning and implementation of a virtual, interdisciplinary group peer-mentoring series, implemented broadly across an academic medical center in New York City. METHODS/STUDY POPULATION: ASPIRE! (Accountability & Safe-Space to Promote, Inspire, Recharge, & Empower one another!) is a group of seven interdisciplinary mid-career academic women faculty, who began collaborations as CTSA KL2 scholars. Our mission is to support interdisciplinary peer coaching for advancement of gender and racial equity among academic faculty and leaders. We designed and implemented a series of virtual symposia focused on essential struggles for clinicians and investigators at during the COVID-19 pandemic. Partnering with Columbia's CTSA, Office for Women and Diverse Faculty, and Office for Research, we invited leaders in psychiatry/psychology, early childhood education, organization/team management, and academic advancement as keynote speakers and facilitated peer-mentoring virtual breakouts. RESULTS/ANTICIPATED RESULTS: These efforts resulted in the completion of four separate 1.5-hour symposia, each with keynote speakers, discussions with academic leaders, and 30-minute breakout peer-mentoring sessions. Session topics included Calibrating Expectations, Helping Families Thrive, Managing Remote Teams, and Faces and Phases of Stress. Enrollment ranged from 30 to 70 participants per session. Participants reported: (1) Keynotes focused on actionable solutions stimulated the most productive conversations; (2) Peers from different disciplines and career stages provided a range of actionable recommendations tested within local contexts; (3) The greatest learning came from the peer-to-peer breakout group sessions. DISCUSSION/SIGNIFICANCE OF FINDINGS: Partnering with academic offices to promote interdisciplinary, peer-mentoring in a virtual format is feasible, novel, and can be well-received across a major academic campus during the COVID-19 pandemic. The success of this programmatic effort

highlights the continued need for expanded peer-to-peer support in academia.

38460

Independent Investigator Incubator (I3) yields external funding within three years for the majority of junior faculty

John Paul Spence, Christina R. Santangelo, Jennifer L. Buddenbaum, Aaron E. Carroll and Matthew R. Allen
Indiana University School of Medicine

ABSTRACT IMPACT: The Independent Investigator Incubator program provides 1:1 mentoring from ‘super-mentors’ to enhance junior faculty careers in research. **OBJECTIVES/GOALS:** In 2014, the Indiana University School of Medicine (IUSM) in collaboration with the Indiana CTSI established the Independent Investigator Incubator (I3) Program. The I3 Program is designed to provide 1:1 mentoring for new research faculty during the crucial early years of their careers. Our goal is to provide an overview of the I3 design and 5-year data. **METHODS/STUDY POPULATION:** The I3 Program employs a resource-sharing, centralized design that provides concentrated 1:1 mentorship from a senior faculty ‘super mentor’ as well as other resources, such as grant writing support. Unlike many mentorship programs, I3 mentors closely interact with the mentees within the School and are compensated for their efforts (5% full-time equivalency per mentee, max of 15%). The number of ‘super mentors’ has grown from 6 to 15 faculty over 5 years, and mentors typically serve 4 to 5 mentees. Mentee applications are accepted on a rolling enrollment basis. The I3 mentees represent a diverse group based on sex, ethnicity, terminal degree, academic track, and discipline. Mentors and mentees have annual reviews through the program. **RESULTS/ANTICIPATED RESULTS:** In five years, 110 mentees have enrolled in the I3 program. Upon entering, 53% had no external funding, 28% had internal funding, 12% had K-awards, 7% had R03/R21 awards. Over the first five years, 75% have received extramural funding. The median funding was \$340,000 with nearly a third of mentees securing grants > 1 million in direct costs. For mentees who joined the program in its first three years (n=59), the average time to a notable extramural grant (defined as a NIH or foundation grant > \$300K direct costs) was 2.2 years (median - 2.6 years). Nearly all mentees were satisfied with their mentor pairing based on the mentor’s ‘availability’ and ‘valuable feedback,’ and all mentees wanted the mentoring relationship to continue **DISCUSSION/SIGNIFICANCE OF FINDINGS:** Since 2014, the I3 Program has had a positive impact on the careers of junior faculty at IUSM as determined by faculty satisfaction and funding metrics. Future focus areas will include developing criteria/models for graduating from the program to balance fiscal sustainability with mentee needs during their transition to mid-career.

78696

A Qualitative Cross-Sectional Study of Leadership in a Pandemic: What do Students Value?

Alec Bernard, Sarah Contreras-Ortiz, Elizabeth Jones, MD, Michael Heung, MD, Timothy C. Guetterman, PhD and Nell Kirst, MD
University of Michigan Medical School

ABSTRACT IMPACT: This real-world study of what students value in crisis leadership fills an important gap in the literature and may inform future leadership development programs in undergraduate

medical education. **OBJECTIVES/GOALS:** Leadership training is of growing importance and prevalence in medical education. The COVID-19 pandemic provides a unique insight into the qualities students value in leaders. Our qualitative study examined these leadership themes and provides a grounding for future development of leadership programs. **METHODS/STUDY POPULATION:** A conventional qualitative approach was used in order to allow open expression of ideas related to leadership in a pandemic. The authors developed a 5 free-text question survey instrument aimed to uncover student perceptions of leadership both during the current pandemic and in crises in general. A participant pilot was performed in order to ensure readability and ease of understanding. We used thematic analysis to examine the content of the survey responses, and inductive coding of the responses allowed identification of emerging themes. Medical students at the University of Michigan were surveyed. **RESULTS/ANTICIPATED RESULTS:** In total, 162 students completed the survey. The demographic characteristics of participants are shown in Table 1. Median age was 25 years old (range, 22-39). There was good representation from the 4 classes in the medical school with 20-30% from each medical school class and 5% of dual degree students. Thematic analysis demonstrated that students value personal characteristics of excellence in their leaders with an orientation towards helping other people. Students believe that leaders must know how to interpret and use information and then that these leaders must be able to communicate expertly to guide organizations. The final theme that emerged is that effective leaders must commit to decisive action. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** This study took place at a time of unprecedented crises and response examples were grounded in this real-world practice of leadership. These results and themes that emerged fill a critical gap and may facilitate future curriculum development for medical students and trainees.

Translational Science, Policy, & Health Outcomes Science

55564

Interactive mindfulness and dialogue sessions are integral components of research training

Kit Knier^{1,2}, Adriana Morales Gomez¹, Joanna Yang Yowler³, Chris Pierret^{1,4} and Linda M. Scholl^{1,5}

¹Mayo Clinic Graduate School of Biomedical Sciences, Mayo Clinic, Rochester, MN, USA, ²Mayo Clinic Medical Scientist Training Program, Mayo Clinic, Rochester, MN, USA, ³Department of Research, Mayo Clinic, Jacksonville, FL, USA, ⁴Department of Biochemistry and Molecular Biology, Mayo Clinic, Rochester, MN, USA and ⁵Office of Applied Scholarship and Education Science, Mayo Clinic College of Medicine, Mayo Clinic, Rochester, MN, USA

ABSTRACT IMPACT: This work demonstrates the integration of interactive mindfulness and dialogue sessions in curricula is both desired by students and effective in conferring resilience, a protective factor that may aid in maintaining wellbeing of trainees interested in pursuing graduate studies in biomedical research and science. **OBJECTIVES/GOALS:** To support student futures in the field of biomedicine, Mayo Clinic Graduate School of Biological Sciences utilized digital platforms to deliver a summer research program in the summer of 2020. One goal of this program, in addition to