development and expand their professional and social networks. UPwARD does so by supporting engagement with external mentors at professional meetings and travel to present work across institutions. PLUS writing accountability groups will enhance publication rates and grant submissions, while also building connections with other URM faculty. Trainees also serve on IN CTSI committees to groom talent for future IN CTSI leadership. DISCUSSION/SIGNIFICANCE OF FINDINGS: Systemic inequities underlie the 'leaky pipeline' challenge we face in cultivating a diverse cadre of senior scientists and independent investigators. With intentional programming and targeted investments, IN CTSI aims to advance more equitable funding outcomes and diverse leadership.

Evaluation

23688

Impact of moving to a virtual format with the Wake Forest School of Medicine (WFSM) Mentor Academy (MA)

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ABSTRACT IMPACT: The Wake Forest School of Medicine Mentor Academy has adapted to provide continued effective and relevant formal mentoring training to translational researchers in a virtual format, to improve mentoring and provide effective mentor-mentee communication tools. OBJECTIVES/GOALS: To determine whether the WFSM Mentor Academy (MA), an effective long-standing mentoring program for research faculty, is compromised after moving from an in-person to an online format as a result of COVID-19 restrictions. METHODS/STUDY POPULATION: A vetted National Research Mentoring Network (NMRN) implemented at WFSM addresses 6 major competencies (Effective Communication, Aligning Expectations, Assessing Understanding, Addressing Equity/Inclusion, Fostering Independence, Promoting Professional Development) over 6 months with 10 sessions (20 contact hrs). COVID-19 required that the MA (13 participants) move to an online format after 3 (out of 10) in-person sessions. We survey 26 self-rated mentoring competencies pre- and post MA, based on a numerical 7-point scale (abstract published for ACTS 2020) and, in 2020, included additional assessments of online versus in-person MA satisfaction/effectiveness and perceived impact on abilities of MA participants to mentor in an exclusively virtual format. RESULTS/ANTICIPATED RESULTS: All 13 participants responded to the survey and rated the online format as effective (9) or somewhat effective (4) for learning content. However, for participant interactions, only 4 found it effective and 9 somewhat effective. When assessing ability to mentor in a virtual format, most negatively affected competencies were 'helping your mentee network effectively' (7 of 13), 'motivating your mentee' (7), and 'identifying and accommodating different communication styles' (6). Goal setting (research goals, career goals) was rated easier under COVID-19 restrictions by 3 mentors. Increases in Pre-Post self-expressed mentoring effectiveness (+1 pt quality; +1 pt meeting mentee expectations) are similar to historical values, and 12 of the 13 mentors changed mentoring practices based on MA experiences. DISCUSSION/SIGNIFICANCE OF FINDINGS: While 2020 ratings for increased effectiveness are similar to prior years, since the 2021 MA will remain online, we will adjust content to address challenges identified in training mentors and in mentoring trainees in virtual settings by strategies to keep MA participants engaged online and sharing new resources for virtual/hybrid format mentoring.

29043

Using Milestones to Judge the Progress of Clinical Informatics Fellows Compared with their Personal Goals

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ABSTRACT IMPACT: We report a novel metric for assessing clinical informatics fellows relative to their personal goals, using standardized milestones that have been approved for the field by ACGME. OBJECTIVES/GOALS: ACGME has defined 20 milestones that serve as the goals for fellows in clinical informatics. Each fellow is rated from 1 to 5 on the achievement of each milestone, where 1 is entry-level, 4 is the level expected of a graduating fellow, and 5 is aspirational. We assessed fellows' progress toward the personal goal levels that they set for each milestone. METHODS/STUDY POPULATION: At the start of the fellowship, we asked each fellow to rate the personal target levels that they want to achieve for each milestone. Since the default target level of achievement for a graduating fellow is a 4, we asked fellows to document exceptions from this target. We calculated a metric for each fellow's achievement of each milestone as their achievement rating (assigned by mentors and rotation leaders during the semi-annual Clinical Competency Committee meeting) divided by the fellow's desired level of achievement. In summarizing across the milestones, we counted those milestones having achievement metrics >=1.0 as 'achieved,' and then for milestones that were not achieved, we calculated an average for the fellow. RESULTS/ANTICIPATED RESULTS: As of June, 2020, our two graduating 2nd-year fellows had fully met 9/20 and 18/20 milestones, respectively. For the unmet milestones they averaged 81% and 85% achievement. The largest shortfalls were 75% achievements in Assessing User Needs for one fellow, and in Recognition of Errors for the other. One of our three 1st-year fellows had fully met 3/20 milestones; the other two had met none at 1st-year's end. For unmet milestones, the 1st-year fellows' average achievement metrics were 69%, 67%, and 52%. The greatest shortfalls were in Resource Utilization (creating job descriptions, budgeting etc.) and in Communication with Patients and Families. However, the rotations that would expose them to project management and to patient-facing systems such as MyChart come in our 2nd-year. DISCUSSION/SIGNIFICANCE OF FINDINGS: Assessing milestones met plus the percent achievement for those not yet met provides a useful metric for comparing fellows and identifying areas in need of more training. Although milestones will soon change to reflect the recent practice analysis for clinical informatics, we expect that this approach to assessing fellows will remain equally useful.

45022

Exploring Career Development Needs of Junior Investigators in Clinical Translational Science

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ABSTRACT IMPACT: By understanding Junior investigator characteristics and CTSA support services which strongly influence scientific productivity and impact, we will inform and improve research

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training and enhance the career development of future generations of clinical and translational science researchers. OBJECTIVES/GOALS: In the field of clinical and translational science, the career trajectory and definition of Junior Investigators (JIs) vary greatly. This study aims to investigate JI characteristics, training, and support that contribute to career development at the University of California Los Angeles (UCLA) Clinical and Translation Science Institute (CTSI). METHODS/STUDY POPULATION: Every 18 months, the UCLA CTSI administers the Longitudinal Scientific Achievement Survey, which collects information on the predictors of scientific productivity and impact. In 2018, a special supplement was added to survey JIs who received CTSA support between 2011 and 2017 (n=305), including questions on knowledge, use, and effectiveness of CTSA specific support, barriers and facilitators of research, scientific productivity, and perceived scientific impact. A literary analysis was conducted to explore previous categorizations of JIs. The JIs in our sample conducted bench to bedside, population and policy research at our four partner sites. Bivariate and logistic regression analysis were conducted to examine the significant predictors of a new grant award attributed to the CTSA support/services. RESULTS/ANTICIPATED RESULTS: The survey response rate was 82% (n=250). Respondents include core voucher co-investigators, enrollees in the Training Program in Translational Science, and K- and K-to-R workshop participants. Bivariate results showed new grant awardees significantly more likely to have the following characteristics: physician scientist with an MD and PhD (47%), pilot grant awardee (42%), core voucher awardee (49%), four or more types of CTSI support (48%), prior affiliation with an NIH institute/center other than NCATS (42%), and reported at least one impact in science, health, and/or the community (72%). Multivariate results showed that investigators with a prior core voucher award, a prior NIH affiliation, or reported one or more impacts were the strongest predictors of obtaining a new grant (each with OR>=4.0). DISCUSSION/SIGNIFICANCE OF FINDINGS: The most successful investigators consulted with NIH program officers and received feedback on their research plans and methods. Sufficient funding is crucially important to research progression. In our CTSA hub, vouchers and grants to initiate new studies or offset costs of existing research are consistent predictors of new extramural funding.

75202

The New Normal: A Virtual Summer Foundations in Research

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ABSTRACT IMPACT: The Summer Foundation on Research gave undergraduate students the opportunity to do research despite the new normal - COVID-19 pandemic. OBJECTIVES/GOALS: The COVID-19 pandemic prevented domestic and international undergraduate students from attending in-person Mayo Clinic Summer Undergraduate Research Programs. Mayo decided to redesign this program as a virtual, 4-week Summer Foundations in Research (SFIR) program. The goal of this program was to give students a scientific research experience. METHODS/STUDY POPULATION: The SFIR included an Introduction to Experimental Design, Dialogue methodology for communicating science, scientific mentoring, asynchronous online modules and a Resiliency component. Evaluations of the program were undertaken to gather feedback for program improvement and to assess the educational and mental health impact on participants. These evaluations asked student to rate each section of the program. Additionally, students were encouraged to provide their own comments and feedback. Statistical analysis of quantitative data was performed using excel. The qualitative data was studied using the identification, analysis and interpretation of patterns method per the student's comments on each of the questions addressed in the survey. RESULTS/ANTICIPATED RESULTS: These evaluations revealed positive outcomes across program components: 66% of the participants found the Resiliency component extremely worthwhile, 80% of participants liked the experimental design and 70% liked the educational courses. Qualitative data showed that mentor/mentee interactions were highly valued, and both participants and faculty suggested increasing the amount of time devoted to these interactions. Small group discussions gave students the opportunity to get to know other peers and encouraged further discussions about science and the community. Participants suggested minor improvements to the program, such as re-creating the online modules specific for undergraduate students, increasing 1-to-1 and small group's discussion, and increasing the length of the program. DISCUSSION/SIGNIFICANCE OF FINDINGS: Despite the quick pivot of the SFIR program, the re-design and new format supported the development of participants' resilience skills and training as future scientists during a particularly challenging time. Mayo is committed to continuing this program as an early step in a pathway to careers in research.

Precision Medicine

74957

Utilizing 3D Printing to Assist Planning of Percutaneous/ Endovascular Procedures in Interventional Radiology

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ABSTRACT IMPACT: We plan to measure the impact of integrating 3D printed models in the planning process of endovascular procedures with the goal of making a case for using this resource more often. OBJECTIVES/GOALS: To measure the impact of using 3D printed models of patient specific anatomy for pre-procedure planning and as an intra-procedure reference. Impact will be measured by: a. Radiation exposure ; b. Contrast dosage; c. Fluoroscopy time; d. Time to procedural completion; e. 'Attempts at access,' when applicable to the procedure METHODS/STUDY POPULATION: Retrospective data will be collected on every patient that received one of prostate artery embolism, transjugular intrahepatic portosystemic shunt placement, or endovascular stent repair in the 3 years prior to the first prospective case. An attempt will be made to create a procedure planning model for every patient that receives one of the three procedures of interest in the 5 months following the first prospective case and those that have a model included in their procedure planning process will be included as part of the experimental group.

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