were offered the 2nd semester of 2018 and consisted of 20 hours of interdisciplinary sessions in: introduction to and definition of CTR; preparation of a CTR-presentation; how to interview/share a presentation of a CT researcher and to prepare a research question in CTR. To assess the knowledge of S and F in the above-mentioned skills and their continuation in the 2nd level of CTR training, surveys were administered: pre-test, at the beginning, post-test, sometime during the FLTCs, and satisfaction at the end of the FLTCs. RESULTS/ANTICIPATED RESULTS: Fifty eight (58) S/F from UPRMSC, UCC and 7 other institutions participated. Forty two (42,72%) answered a pre-test and 31/42 (74%) completed the post-test. Results showed that S/F: who correctly defined CTR increased from 7% to 77 %; their ability to identify a CT researcher increased from 10% to 83%. Fifty five percent (55 %) (21/38) S/F that were certified in the FLTCs, answered the satisfaction survey. One hundred percent (100%) indicated that the materials offered contributed in the identification of a CT researcher and a topic in CTR; 100% answered that the FLTCs contributed higher knowledge in and provided new skills in CTR. Moreover, 31/38 (82%) S/F started the 2nd level of training. DISCUSSION/SIGNIFICANCE OF IMPACT: The FLTCs were successful in increasing S/F knowledge of CTR and to further engage in 2nd level of trainings. Title V impact extended island wide, increasing the diversity of represented health professions and science fields among participants. The interventions were deemed to be of high quality.

4235

The Use of Checklists Throughout the Lifecourse of a Clinical Research Study: The Rockefeller University Checklist Suite

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OBJECTIVES/GOALS: We have developed a comprehensive Translational Research Navigation Program to guide investigators all the way from protocol development through study closure. As the program evolved, we initially developed organizational tools and then restructured them into a series of checklists to ensure that critical elements were not excluded or duplicated. METHODS/STUDY POPULATION: A series of checklists to assure that all research elements, including regulatory, scientific, and institutional, are addressed from protocol inception through study closure were developed by clinical research coordinators/navigators. The checklists are periodically updated and modified to reflect changing local and national regulations and policies. The first tool became the "Protocol Development Checklist" and then additional tools were developed and modified into a suite of navigation checklists that include "Protocol Implementation Checklist," "Protocol Conduct Checklist," and "Protocol Completion Checklist." RESULTS/ANTICIPATED RESULTS: The checklists have been incorporated into the Translational Research Navigation Program and have enhanced the organization and quality of protocols throughout their lifespan. For example, implementation of the Protocol Development Checklist resulted in a reduction in time to IRB approval (currently 10 days), and implementation of the Protocol Implementation Checklist has impacted the time from IRB approval to study start-up. The Protocol Conduct Checklist has aided investigators in being better prepared and more organized for study conduct activities and the Protocol Closure Checklist has assured timely protocol closure and regulatory compliance, including reporting to ClinicalTrials.gov. DISCUSSION/SIGNIFICANCE OF IMPACT:

Protocol checklists are powerful tools to enhance thoroughness, organization, and quality of the clinical research process. The Rockefeller University protocol checklists are available to the CTSA and Scientific Communities. CONFLICT OF INTEREST DESCRIPTION: NA.

4274

Thirteen Years of Pipeline Programming at the University of Rochester's Clinical & Translational Science Institute to Train Physician-Scientists

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OBJECTIVES/GOALS: Physician-scientists play a vital role in biomedical research but this chosen career path has many challenges, such as long training periods and funding. The University of Rochester (UR) CTSI pipeline programs address this by enabling medical trainees to partake in enriched research experiences. METHODS/STUDY POPULATION: The UR CTSI TL1 is a training grant from the National Center for Advancing Translational Science (NCATS), which funds predoctoral trainees. The TL1-funded physician-scientist pipeline includes the Academic Research Track (ART) year-out program and the Medical Science Training Program (MSTP). We describe the characteristics and training outcomes of TL1-funded trainees. We also obtained testimonials of current and former trainees regarding their career component decision-making, and their perception of programs, in order to identify how best to address the challenges of the physician-scientist workforce, and to facilitate the transition between the clinic and bench. RESULTS/ANTICIPATED RESULTS: From 2006-2019, the UR CTSI has had 56 ART trainees and 17 MSTP trainees complete training; six trainees have transitioned into the MSTP after completing the ART program. As of 2019, 63 of 67 graduated trainees (94%) have continued their engagement in CTS after graduation. Importantly, our programs have facilitated the careers of 31 women (39.7%) and 12 under-represented minorities (15.4%). We will present a breadth of qualitative data to inform which parts of the TL1-related programs have been successful, and which parts could use programmatic improvement to aid the transition into the physician-scientist workforce. DISCUSSION/SIGNIFICANCE OF IMPACT: Physician-scientist training barriers in the US have resulted in a shortage of these professionals in the clinical and translation workforce. Our data show the UR CTSI has been successful in addressing several of these challenges via the TL1-funded ART, MSTP, and ART/MSTP dual program pipeline.

Evaluation

4124

An innovative Tool for Completing the Clinical and Translational Science Award (CTSA) Research Performance Progress Report (RPPR) using REDCap

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OBJECTIVES/GOALS: The RPPR Tool was created to accurately and systematically track our CTSA's overall program goals and core's

progress in real time. It establishes and centralizes the continuous collection of key performance indicators and fosters accountability and transparency among cores and leadership. METHODS/STUDY POPULATION: Using the University of Chicago's Annual Progress Report REDCap data dictionary, UI Institute for Clinical and Translational Science (ICTS) core managers convened to explore the adaptability of the reporting format for the CTSA. The team developed the more user friendly and easily accessible RPPR Reporting Tool using REDCap to better fit our CTSA. The RPPR in REDCap provides a central location to monitor the activities for each core, gather status updates, generate performance reports, and identify key performance indicators and challenges to prevent failures in the future. All data are transparent and accessible on-demand to individual core managers, evaluators, and ICTS leadership. RESULTS/ANTICIPATED RESULTS: UI's RPPR Tool has improved the compliance with ongoing monitoring and reporting of CTSA program's performance. Documenting all relevant information in a centralized space has eased the administrative and evaluation burden of preparing the RPPR. Furthermore, REDCap as a commonly used tool allows the core managers to complete this reporting with minimal guidance. This tool encourages each core to be accountable for documenting their respective progress. The transparency of the reporting allows the Co-PIs along with the leadership team to access the data at any given time to stay updated on the ICTS' overall progress and to make the appropriate improvements as needed. DISCUSSION/SIGNIFICANCE OF IMPACT: The RPPR is a required component of all CTSA grants. UI's RPPR Tool has been instrumental in comprehensively tracking progress of the ICTS and its contributions to translational research. UI is collaborating with CTSA peers to improve the RPPR Tool, so it can become an asset for any CTSA to adapt.

4051

Assessing outcomes of Miami CTSI's Mentored Career Development KL2 Program: Using bibliometric and network visualization approaches to complement traditional outcome metrics

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OBJECTIVES/GOALS: The goal of this project was to assess the scientific impact of Miami CTSI's Mentored Career Development (KL2) Program using bibliometric tools and network visualization in addition to the traditional metrics used to provide a comprehensive evaluation. METHODS/STUDY POPULATION: Scholarly productivity of KL2 scholars were tracked using REDCap. For bibliometric data analysis and visualization, publications were queried using iCite (NIH Office of Portfolio Analysis) and Web of Science database. A total of 173 publications produced by eight KL2 scholars from 2013-2018 were analyzed and categorized into pre-award, during award, and post-award periods. iCite was used to assess scientific influence and translation. Scientific networks and collaboration were visualized using VOSviewer (Centre for Science and Technology Studies, Leiden University). CTSA Common Metrics were tracked using the Results Based Accountability framework. RESULTS/ANTICIPATED RESULTS: Albeit of modest size, the Miami CTSI's KL2 Program had significant scientific productivity and impact in its first five years. Our KL2 scholars' publications were cited twice as frequently as other papers in their fields. Further, 48% of publications post KL2 award were above the NIH 50th percentile and had higher citation impact compared to the average NIH-funded paper; 11% were in the top 10% NIH citation ranking. In contrast, only 20% of the publications pre-KL2 award were above the NIH 50th percentile. The program also promoted research collaboration; network visualizations indicate larger co-authorship and organization networks of KL2 scholars post-award. DISCUSSION/SIGNIFICANCE OF IMPACT: Bibliometric and data visualization approaches helped us better identify trends and gauge effectiveness of the KL2 program. These findings provided useful insight into the scientific influence and impact of our scholars' work.

4034

Can Connections IN Health become a research-based model to improve health outcomes through community health coalitions?

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OBJECTIVES/GOALS: Connections IN Health's goal is to coordinate, integrate, and enrich health coalition work through extended connections among community and academic stakeholders within and across coalitions and geographies within Indiana. We aim to evaluate stakeholder connections to assess coalition effectiveness and the quality of partnership networks. METHODS/STUDY POPULATION: We will collect data longitudinally to evaluate Connections IN Health using a unique triangulation of effectiveness surveys, social network analysis, and health data. Cross-sectional functioning and social network analysis surveys were distributed to coalition members before the transition to Connections IN Health engagement (baseline) and will be distributed again each year thereafter to identify changes in coalition perceived effectiveness and changes in the structure/nature of partnership networks after implementation of the partnership. We plan to utilize publicly available health data to measure proximal changes in health outcomes at the neighborhood level and use Pearson's correlations to check for associations between perceived coalition effectiveness and health outcomes. RESULTS/ANTICIPATED RESULTS: We found low baseline scores in perceived effectiveness, especially in the areas of leadership, operational understanding, and satisfaction, from the coalition members. From our social network analysis, we found relatively low cohesion scores (measured as network density) among each of the coalition networks, and even lower scores for collaboration among coalition members. We expect to see positive increases in perceived coalition effectiveness, as well as an increase in the density and level of collaboration among coalition networks as Connections IN Health develops. Finally, we expect to see positive changes in proximal health outcomes associated with our measures of coalition effectiveness. DISCUSSION/SIGNIFICANCE OF IMPACT: The results of our project will be distributed back to the coalition leaders and members in order to sustain and improve the coalitions. The visualization of the coalition member's network can be used to demonstrate opportunities for enhanced partnerships and collaboration.