certificate of completion for the entire set of courses. DISCUSSION/SIGNIFICANCE: Compared to previously available offerings, the new training program offers a more comprehensive view of this important field. Next, we plan to develop additional courses and create a Masters program that includes synchronous learning and a complementary experiential component for hands-on application of HDS principles.

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Supporting Early-Career Faculty Grant Proposals through Narrative Development Training: A Proposal Narrative Development Program for Early-Career Faculty

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OBJECTIVES/GOALS: Faculty pursuing their first independent research grants often struggle to express their ideas in a concise, compelling way. Thus, we developed the "Research and Scholarship Storytelling Bootcamp" to equip these faculty with narrative development skills applicable across disciplines and mechanisms. METHODS/STUDY POPULATION: Early-career researchers who were preparing either their first NIH R-series application or an NSF CAREER award proposal were invited to participate. Enrollment was limited to 20 participants. Those accepted learned the "And-But-Therefore" narrative framework by reading a short book and attending 4 synchronous lectures. Between sessions, they applied the framework by drafting abstracts and Specific Aims/Project Summary documents and reviewing their fellow participants' work. We assessed participants' comfort with storytelling, perceptions of preparedness, and confidence regarding funding chances, before and after the program using a visual analog scale (max 100 points) and calculated Cohen's d to evaluate the effect size of any changes. RESULTS/ANTICIPATED RESULTS: Thirty people applied for 20 slots, indicating strong demand. Eleven NIH applicants and 9 NSF applicants enrolled. Before the program, participants rated their comfort with storytelling at 45 ± 25, their preparedness at 39 ± 24, and their funding confidence at 39 ± 26. Nine total participants completed all sessions, assignments, and surveys. Completion rates were comparable for NIH- and NSF-targeting participants. After the program, completing participants reported increases in their comfort with storytelling (68 ± 14 post vs 32 ± 20 pre, d = 1.46), perceived preparedness (64 ± 20 post vs 48 ± 26 pre, d=0.58), and confidence in funding chances (56 ± 19 post vs 40 ± 27 pre, d=0.75). DISCUSSION/SIGNIFICANCE: This program was the first of its kind for multidisciplinary early-career faculty at our institution. The program successfully achieved its objectives for those who completed all activities. Future analysis of survey comments and proposal success rates will reveal barriers to full program engagement and opportunities for further training.

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Adapting Center for Improvement of Mentored Experiences in Research (CIMER) Mentor Training for Clinical Research Professionals: A Process Description

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OBJECTIVES/GOALS: Learn how the National Organization of Research Development Professionals (NORDP) adapted the Center for Improvement of Mentored Experiences in Research (CIMER) NIH-funded evidenced-based mentor training curriculum for research development professionals and how the curriculum will be further adapted for clinical research professionals. METHODS/STUDY POPULATION: NORDP pioneered the adaptation of the CIMER curriculum for professional research staff. In addition to revamping the case studies and ensuring the curriculum was appropriately staff-centric, the NORDP team developed best practices for adapting the curriculum. This approach included four phases: (1) developing expertise in mentor training, (2) adapting curriculum for staff, (3) creating role-specific case studies, and (4) integrating mentor training with institutional or professional association-based mentoring programs. In collaboration with CIMER and units at the University of Minnesota (UMN), the mentor training model for research development will be further adapted for clinical research staff, i.e. coordinators, regulators, facilitators. RESULTS/ANTICIPATED RESULTS: This poster will discuss the preliminary work of adapting the curriculum for clinical research professionals by the UMN's Departments of Family Medicine and Community Health and Clinical and Translational Science Institute's Translational Workforce Development team. The anticipated short to mid-term outcomes of this work include: (1) improved research professionals mentoring knowledge and skills, (2) diversity addressed across research roles, (3) reduced staff turnover and associated costs, (4) increased staff job satisfaction and moral, and (5) research culture changed to value mentoring excellence across the academic enterprise. DISCUSSION/SIGNIFICANCE: Research mentoring has traditionally been focused on faculty and trainees. Given the unique skill sets and increasing complexity of research staff roles, mentoring can increase job satisfaction and reduce the overall costs related to turnover, i.e. research productivity, loss of institutional knowledge, hiring costs, etc.

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A Pilot Project Program to Foster the Inclusion of Undergraduate Faculty and Students and Graduate Students to Work with Experienced Researchers in a Mentored Research Experience in Clinical and Translational Science Succeeds Beyond Geographical and Institutional Boundaries

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OBJECTIVES/GOALS: The Title V Project at the Medical Sciences Campus aims to expand the knowledge in Clinical and Translational Research (CTR) and diversify the CTR workforce throughout Puerto Rico. A Pilot Project Program (PiP) offers research training for Undergraduate students (UgS), Graduate Students (GS), and Undergraduate program Faculty (UgF). METHODS/STUDY POPULATION: Since 2021, the Title V Project has established a rolling application process to which researchers from any scientific background related to CTR in all post-secondary institutions in Puerto Rico may submit research proposals. These are peer-reviewed considering the following criteria: the research team composition must include UgS, GS, and UgF; the primary researcher's expertise; the significance of the proposed topic related to Puerto Rico's health problems; and the research plan's quality. In addition, proposals must include a career plan for student and faculty members to participate in further training in CTR-related topics, such as scientific communication and statistical analyses, also offered through the Title V program. RESULTS/ANTICIPATED RESULTS: Twelve

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(12) PiP research teams showcase diversity in research areas with representation from Nursing, Occupational Therapy, Cancer, Cell Biology, Microbiology, Anatomy and Medical Images, Electro-Chemistry, Anatomy, and Physiology. In addition, Pip's team members represent eleven (11) different institutions across seven different geographical areas, whose complete profiles we delineate in the presentation. Teams have the participation of twelve (12) primary researchers, five (5) mentors, twelve (12) UgF, seventeen (17) UGs, four (4) medical students in different stages, and nine (9) GS. We will present the composition, research topics, development, and participants' feedback. DISCUSSION/SIGNIFICANCE: The PiP program has been instrumental in organizing interdisciplinary and interinstitutional research teams. It has proven to be an effective strategy for fostering inclusion, diversity, and equity in CTR and promotes the practice of team science. Teams' research responds to health issues in this Hispanic population.

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Team Science Training Needs and Preferences for Clinical Research Professionals: A Mixed Methods Needs Assessment

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OBJECTIVES/GOALS: To comprehensively understand the training needs of clinical research professionals (CRPs) employed across various roles in team science. The purpose is to identify areas for competency development and determine the modality of training desired to enhance their skills further. METHODS/STUDY POPULATION: This study targets Clinical Research Professionals (CRPs) across various roles in Academic Health Centers via an online survey. From novices to experts, participants are often trained on the job covering some clinical research competencies, but team science aspects like communication and leadership are usually overlooked. The survey will assess current skills, identify training gaps, and explore preferred learning methods and topics. Participants will be recruited through the CTSA hub research network. Additionally, they'll share experiences of team cohesion, dynamics, conflict, and their contributions to the team through participation in focus group sessions.The focus groups will be held via Zoom with volunteer participants from the survey (6 per session, 3 sessions, N=18). RESULTS/ANTICIPATED RESULTS: The recently developed leveled CRP team science competencies based on Lotrechianno (2022) will be the basis of the survey items. Demographic characteristics of the participants by role will be presented. Moreover, perceptions of team science applications, learning needs and training preferences will be described. Results will be compared across CRP roles. Finally, three recorded and transcribed focus groups (n=18) will contribute to knowledge gained through this research allowing for a deeper understanding of training needs. Qualitative analyzes of recorded focus-group discussions will present key themes. Qualitative data will be coded by more than two people for interrater reliability. DISCUSSION/SIGNIFICANCE: This study offers the first needs assessment on academic medical center CRP team science learning requirements, utilizing newly established CRP individual and team competencies. Findings will guide the creation of tailored training and research initiatives.

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Validation of the Mentoring Competency Assessment to evaluate the mentorship skills and competencies of mentees

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OBJECTIVES/GOALS: The purpose of this study was to assess if the Mentoring Competency Assessment (MCA) could be used to capture mentee gains in mentorship skills and how the mentorship competencies may vary structurally for mentees compared to mentors, while the original MCA was shown to be a validated measure to assess mentor skills. METHODS/STUDY POPULATION: The mentee training survey data were collected nationally from 2015 to 2022. The survey data set included 401 respondents who consented to participate after 59 mentee training events hosted by 34 institutions/organizations who participated in face-to-face and online training as well as completed the Mentoring Competency Assessment (MCA) in their surveys. We conducted principal component analysis (PCA) with varimax rotation to investigate the internal structure of the MCA and Hatcher's criteria were applied. After a team of mentoring experts independently interpreted the PCA results and reached a consensus on the interpretations of the components, factor analysis and internal consistency reliability analysis were applied to assess the construct validity and the reliability. RESULTS/ANTICIPATED RESULTS: There were significant component loadings of the eight components with varimax rotation and 22 of the total 26 items were loaded into components. Four items, (5) pursuing strategies to improve communication, (6) coordinating with other mentors, (11) developing strategies to meet goals, and (23) setting career goals, were excluded from the factor analysis and Cronbach's alpha analysis since these items were not significantly loaded into any components. The eight-component structure was validated (χ^2=313.209, p<.001, RMSEA=.083, CFI=.907, TLI=.881, SRMR=.073) and the hypothesized model of the eight components resulted in an acceptable fit to the data with standardized factor loadings ranging from 0.58 to 0.93. The alpha coefficient is from 0.58 to 0.90, suggesting the items have high internal consistency. DISCUSSION/SIGNIFICANCE: Based upon the findings we recommend that the full revised MCA for mentees is used to capture mentees' mentorship skill gains even if not all of the competency modules are used in the training. The development and validation of measures such as the MCA are important as we move toward the use of common measures across programs such as the CTSAs.

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Training & Sustaining: Training and learning collaborative outcomes across a statewide network for early diagnosis of children with autism

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OBJECTIVES/GOALS: Community-based primary care autism diagnostic models are one promising solution to delays in autism diagnosis. Our objective is to describe the development and report on outcomes related to primary care professional (PCP) training and sustained engagement in a longitudinal learning collaborative

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