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OBJECTIVES/GOALS: The Bench Program offers academically talented high school students a unique opportunity to engage in cutting-edge research. Students are paired with a UTMB graduate student or postdoc and mentored by faculty, gaining hands-on experience in a rigorous, research-focused setting. **METHODS/STUDY POPULATION:** The Bench Tutorials course is open to all Ball High students and pairs each student with a UTMB graduate or post-doctoral mentor based on scientific interests. Students commit at least four hours weekly to supervised research and instruction, totaling about 40 hours per semester. This 5.0-credit course mirrors college-level rigor, with regular lab meetings and mentorship. Students present their research at two symposiums annually, including a Year-End event. Successful completion is considered an advanced academic achievement. **RESULTS/ANTICIPATED RESULTS:** The Bench Program continues to serve as a model biomedical training program for qualified GISD high school students. Since its start, it has enrolled over 490 students, many of whom have pursued science-related college paths. For the upcoming year, we aim to maintain a high-quality, intensive experience by enrolling around 16 students, each paired with one of 8 dedicated mentors. This structure ensures personalized guidance and hands-on research training, helping to shape the next generation of scientific leaders. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The Bench Program gives high school students hands-on research experience with UTMB scientists. It mirrors graduate-level rigor, requiring time management and independent learning. The program is expanding to reach more students through GGCTSA partnerships.

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Evaluating grant writing support programs to enhance faculty research funding success

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OBJECTIVES/GOALS: To evaluate the effectiveness of multiple grant writing support services – including workshops, one-on-one mentoring, and grant pre-review – in improving faculty success in securing research funding. **METHODS/STUDY POPULATION:** The study included junior faculty participating in the R Club Grant Program – a grant development program to assist junior faculty in the preparation of their first research grant proposal – within the University of Cincinnati College of Medicine (UC COM) and the Center for Clinical & Translational Science & Training (CCTST), as well as UC COM faculty who engaged in one-on-one mentoring, workshops, or the Grant Pre-Review Program. Data on participation, satisfaction, and grant submission outcomes were collected and analyzed to assess the impact of each grant writing support service.

RESULTS/ANTICIPATED RESULTS: More than 100 investigators participated in R Club Grant Program workshops and received supplemental grant development materials. Comprehensive support – including workshops, mentoring, and pre-review – has contributed to successful funding across multiple NIH mechanisms (K23, R01, R03, R21, R35, and R56). Based on positive participant feedback, future expansion will include online and on-demand resources to enhance accessibility to grant writing webinars and training materials. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Comprehensive grant writing support improves faculty preparedness and funding success. Expanding to online and on-demand formats will broaden access, promote equity in research training, and strengthen institutional grant competitiveness.

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Development of students (S) and faculty (F) of undergraduate (Ug) programs in Puerto Rico (PR) in clinical and translational research (CTR) with an interdisciplinary approach (IA): Real-world impact from 2020 to 2025

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OBJECTIVES/GOALS: 1. To develop UgS and UgF in CTR with IA in PR. 2. To equip UgS and UgF with the necessary knowledge, skills, and mentoring and provide hands-on experiences for their academic and professional development. 3. To provide UgS and UgF with dissemination opportunities. **METHODS/STUDY POPULATION:** Main approaches: Restructure the Center for Research Education and Science Communication Opportunities (CRESCO), hub to provide support in CTR skills, statistics, scientific writing, and access to library resources; and organize/launch a training program in CTR to support student development in CTR. Main strategies: peer-mentoring with graduate students (GS), faculty (F), and health professionals (HP); a pilot project (PiP) program to offer UgS, GS, F, and HP hands-on experiences with participation in up-to-date research in CTR under the mentorship of a principal investigator-mentor; organization/offering the Title V Annual Symposium in CTR as a dissemination platform; and acquisition of supplies/equipment to support the research and infrastructure to the library and academic programs. **RESULTS/ANTICIPATED RESULTS:** CRESCO: Acquired 2-96' interactive monitors and refurbished 7 study rooms with technology, boosting distance learning. Developed a Web portal, offered 27,249 consultations, and 692 attended CTR workshops. Training program: INTD 5998 course had 74 students (64 UPR-MSc and 10 from other campuses/institutions). 190 Orientations offered to Academic Program in Health Sciences (APHS), reaching 36 departmental chairs (dc) and 129 UgS from 10 UPR campuses, and 23 dc and 2 UgS from other universities. Healthcare associations approved one Continuing Education Module, and two were submitted for approval. PiP: 32 PiP teams (32 primary researchers, 32 UgF,

42 UgS, and 21 GS) from 9 institutions. Presented 38 oral/poster presentations (27 PiPs, 11 Collaborators) and published 4 peer-reviewed publications. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The project strengthened CTR research/education through CRESCO facilities, consultations, and training. The INTD 5998 course, APHS orientations, and PiP teams (from diverse campuses/institutions), expanded participation and hands-on experience, yielding presentations, publications, UgS seeking graduate studies, and real-world impact.

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Methods and datasets: Products from the National Research Mentoring Network Phase II Coordination Center

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OBJECTIVES/GOALS: From 2019 to 2025, the National Research Mentoring Network (NRMN) Coordination Center sought to facilitate the collective impact of the 11 NRMN Phase II research studies. Through the building and fostering of community and coordinating research, we sought to support the NRMN research teams in their collective efforts. **METHODS/STUDY POPULATION:** We worked with the 11 NRMN Phase II research studies, who in turn worked with a diverse group of researchers, from undergraduate to faculty, across the country. **RESULTS/ANTICIPATED RESULTS:** We here present the two major products that arose from our work as a coordination center. The first, the NRMN data site, holds a measurement library and information for all the common measures used across the 11 NRMN Phase II research studies. Additionally, we summarize and present a book published on the lessons learned by our coordination center. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The NRMN data site serves as a powerful tool for those wishing to further explore the NRMN Phase II common data, one of the largest datasets available on biomedical research training and professional development. Our lessons learned book is an important reference for those wishing to replicate and run similar coordination centers in the future.

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Increasing the Clinical Research Coordinator Workforce through Implementation of a comprehensive training program across the IDeA State Consortium for Clinical Research (ISCORE)

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OBJECTIVES/GOALS: To meet the shortage of trained clinical research personnel, the IDeA State Consortium for Clinical Research Resource Center (ISCORE-RC) developed the Clinical Research Coordinator Development Program (CRCDP). This comprehensive program addresses themes previously identified as challenges to clinical workforce professional development. **METHODS/STUDY POPULATION:** CRCDP is offered at 13 academic medical centers in IDeA states and is designed to train clinical research professionals who have minimal or no prior experience in clinical research coordination. This comprehensive training comprises the following core components: Didactic Learning, Competency-Based Experiential Learning, Objective Competency Evaluation, Mentorship, and Continued Professional Development. Trainees complete > 400 hours of experiential learning. Each trainee is paired with one or more designated preceptors who evaluate and verify proficiency in 28 essential clinical research skills. To ensure successful implementation and institutional engagement, each site designates a program champion responsible for promoting program adoption and local execution. **RESULTS/ANTICIPATED RESULTS:** Launched in March 2024, the CRCDP has received 171 certificate applications, accepted 114 trainees, and graduated 60 trainees. The anticipated results of this project will include outcome findings from post certificate structured interviews that describe impact of CRCDP components on continuation of research and trainee perceptions of value provided by the various program components. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Availability of trained CRCs is limited and a barrier to expansion of clinical trials in IDeA states. ISCORE-RC is addressing this workforce development gap through an innovative program. Programmatic data will provide insight and better understanding of the facilitators of program implementation and impact on clinical research infrastructure.

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A landscape analysis of mentoring programs for clinical research professionals

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OBJECTIVES/GOALS: This poster will describe a national landscape analysis of mentoring programs for Clinical Research Professionals (CRPs) in academic medical centers, identifying gaps and opportunities for translational workforce development. This