

3219

### Integration of Undergraduate (US) and Graduate (GS) Students and Faculty (F) in Clinical and Translational Research (CTR) in Puerto Rico: The University of Puerto Rico-Medical Sciences Campus (UPR-MSC) and Universidad Central del Caribe (UCC) Experience

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**OBJECTIVES/SPECIFIC AIMS:** The Title V Cooperative Project of the UPR-MSC and UCC has demonstrated that educational interventions in CTR are very effective in fulfilling the objective of promoting awareness, stimulate interest and increase the knowledge, skills and opportunities, to US, GS and F (participants) in CTR. **METHODS/STUDY POPULATION:** The training sessions (TS) offered through the Title V initiative have become an engine for the involvement in CTR for participants from higher education institutions island-wide. TS consisted of cycles –level 1 and 2–: Research Education Towards Opportunities (RETO,I,II) and Mentorship Offering Training Opportunities for Research (MOTOR,I,II), ending in the formation of the Clinical and Translational Mentoring Teams (CTMTs), in which participants, paired by their research interests, were mentored by a well-established CT researchers in their research project, to be developed in the Intensive Development and Experiences in Advancement of Research and Increased Opportunities (IDEARIO). **RESULTS/ANTICIPATED RESULTS:** Up to date, 4 TS-level 1 and 2 TS-level 2 were offered. Eighty (80) participants completed level 1, distributed: 42 (52.5%) US in RETO, 21 (26.25%) GS and 17 (21.25%) F in MOTOR and 17 participants completed level 2, distributed: 4 (23.52%) US in RETO, 6 (25.29%) GS and 7 (41.17%) F in MOTOR. From which, 15, with 8 CT researchers, formed 5 CTMTs in different research areas – cardio, neuro, liver, renal, Zika–. **DISCUSSION/SIGNIFICANCE OF IMPACT:** US, GS and F were integrated in the active process throughout educational levels for their development in CTR.

3368

### Mentoring from the ground up: Improving mentoring relationships by empowering mentees

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**OBJECTIVES/SPECIFIC AIMS:** Program Directors and Ph.D. students within the Clinical and Translational Science (CTS) track identified mentorship development as a knowledge gap and educational priority. Most mentors are not provided education in how to be an effective mentor. Similarly, most mentees are not provided education or training on how to optimize a mentoring relationship for their learning and professional development (Ramani, 2006). We adapted mentor training curriculum developed by the University of Wisconsin and facilitated an eight-hour program to better prepare learners to be empowered mentees as well as future mentors. **METHODS/STUDY POPULATION:** We utilized the Mentoring Competency Assessment (MCA) to measure CTS Ph.D. students'

self-perceptions of eight competencies through a pre and post-intervention survey design (Fleming, et al., 2013). We adapted an evidence-based curriculum (Pfund, et al., 2014) to be delivered to Ph.D. students within an existing structure of educational offerings and incorporated case based discussions, frequent low-stakes formative assessments, and peer-to-peer facilitation to heighten authenticity, relevance and immediacy to the learning experiences. This structured curriculum, intended to increase skills, knowledge, and behaviors to make students more active participants in their mentoring relationships, focuses on one competency area per monthly session and was implemented May-December 2018. Session participation by program alumni allows for contextual demonstration and competency application. **RESULTS/ANTICIPATED RESULTS:** Preliminary data demonstrates heightened perceived competency in most domains assessed. We found mentors generally rated their mentee's skills at a higher level than the mentees' perceived ratings. We also saw significant differences between groups in a few domains e. g. new vs. established relationships, females vs. males, etc. Individual session evaluations are extremely positive, and the students routinely report behavioral changes as a result of these sessions. **DISCUSSION/SIGNIFICANCE OF IMPACT:** We have demonstrated the successful adaptation and innovative facilitation of a successful mentorship development program for Ph.D. students. We propose that several factors discussed are critical in the success of this type of curriculum. Preliminary conclusion: A structured curriculum in mentoring relationships increases Ph.D. mentee empowerment and readiness to lead future mentoring relationships.

3441

### Physician Attitudes Towards the Use of Dietary Interventions in Their Practice: Preliminary Results

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**OBJECTIVES/SPECIFIC AIMS:** Diet-related diseases such as obesity, hypertension, diabetes, and irritable bowel syndrome comprise a large portion of primary care visits in the United States. However, primary care physicians seldom prescribe dietary interventions that effectively treat these conditions, and their rate of use has declined in recent years. There are many plausible reasons for this decline, including baseline nutrition education, perceived efficacy of the intervention, time limitations, and compensation. No study has been conducted to assess which of these factors physicians perceive as relevant to their decision to use dietary interventions in their practice. Our study aims to identify key factors that ubiquitously limit physicians' use of dietary interventions. **METHODS/STUDY POPULATION:** We created a 30-item survey designed to evaluate physicians' self-reported use of dietary interventions, relevant knowledge base, comfort employing these interventions, and attitudes regarding the importance of such interventions in their practices. This survey was distributed to internal medicine, pediatrics, and family medicine residents and physicians at Michigan Medicine and St. Joseph hospitals in Ann Arbor, MI. **RESULTS/ANTICIPATED RESULTS:** Socio-demographic data, knowledge base and attitudes will be summarized and analyzed using descriptive statistics and simple regression modeling following the administration of the survey. **DISCUSSION/SIGNIFICANCE OF IMPACT:** We hope that our study may elucidate identify specific avenues of increasing the use of dietary interventions, and thus of improving treatment efficacy for diet-related disorders in the United States.