

(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) UG, 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 Lotrechiano (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 ( $\chi^2=313.209$ ,  $p<.001$ , 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 CTSA's.

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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