

structures and through a conceptual perspective of resource investment. In other words, they viewed their time and their effort as valuable – and notably, scarce – resources, which they invest in patient care, interprofessional communication, and other tasks. There are two key pathways that characterize the culture of interprofessional communication: collaborative communication and transactional interactions, depending on whether an individual perceives the goals of another person, department, or level of the hierarchical institution as aligned with their own goals. DISCUSSION/SIGNIFICANCE OF IMPACT: Positive cultures of interprofessional communication in the healthcare setting depend on perceived goal alignment among individuals, departments, and leadership. Future research can explore how perceptions of goal alignment are developed and empirically test this situation-specific theory in other healthcare system settings.

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Advancing the science and practice of mentorship through a CTSA community of practice

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OBJECTIVES/GOALS: This poster describes the scientific rationale, needs assessment, programmatic elements, and impact of a community of practice (CoP) focusing on advancing equity in the science and practice of mentorship. METHODS/STUDY POPULATION: In 2023, the University of Wisconsin Institute for Clinical and Translational Research received NIH R13 funding to host a conference, the Science of Effective Mentorship (Asquith, McDaniels, et al., 2023). Approximately 150 researchers and program leaders from Clinical and Translational Science Awards (CTSA) Hubs and beyond attended. Data were collected before, during, and after the conference, providing the authors with an initial idea of community needs. As a result, a mentorship CoP was formed. In the subsequent 18 months, a steering and advisory committee established a program of virtual, topic-focused virtual events every 3 months as well as a community website, with increasing attendance and utilization. A survey was disseminated after the completion of one year, and a focus group was held during the last virtual gathering. RESULTS/ANTICIPATED RESULTS: The demand for infrastructure to support a national community of practice will be demonstrated. The demographic and positional diversity (e.g. role within a CTSA Hub) will highlight the opportunities of convening this diverse community. Organizational challenges and opportunities will be highlighted. Assessment data will reveal the broad range of needs and interests of participants. Aggregate demographic, professional, and participation data about community of practice members will be shared, as well as the governance and programmatic elements of this community of practice. Evaluation results from the first year of activity will be displayed. Needs for sustainability will be discussed. DISCUSSION/SIGNIFICANCE OF IMPACT: CoPs are not new in the CTR space. Membership in a CoP may reduce isolation

individuals feel as they negotiate the important work of equity in the biomedical workforce. Members of this community of practice share the expertise and commitment to promoting equity in the biomedical workforce through supporting robust culture of mentorship.

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Onboarding meaningfully: A three-factor competency-based program for new clinical research professionals

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OBJECTIVES/GOALS: Clinical research professional (CRP) managers often struggle to onboard effectively in the rapid timelines necessary. We developed a competency-based, standardized, onboarding program using a 3-factor adult learning approach and designed to be easily adaptable, broadly shared, and readily implemented across a variety of research environments. METHODS/STUDY POPULATION: The Duke competency-based onboarding program for CRPs was developed through an iterative process with input from research community members. Initially, 97 courses were mapped to clinical research competencies using the Joint Taskforce for Clinical Trial Competency framework to identify training gaps and establish a structured learning framework. The onboarding program includes three key components: role specific Express Start modules (self-paced e-learning), Onboarding Learning Plans (a customizable timeline for competency-mapped trainings), and Engagement Activity Packets (guides for manager-driven applied learning in specific competency areas). An additional cohort-based mentorship program (RPN+) includes 4 months of mentored group learning and seminars designed for new professionals. RESULTS/ANTICIPATED RESULTS: Since launch in 2021, 521 new employees have registered an Onboarding Learning Plan representing more than 55% of new CRPs. Additionally, nearly 85% of new CRPs have completed the Express Start role-specific online modules. 54% of new CRPs have enrolled in RPN+ (launched in 2022) and have included members from 22 of 24 clinical research units. Users have reflected the range of clinical research staff roles at Duke, with the majority being clinical research coordinators. A significant predominance of participants found the programs beneficial and would recommend to others. Since launch, program materials have been shared with 64 external groups and institutions via 91 requests. DISCUSSION/SIGNIFICANCE OF IMPACT: Duke's CRP onboarding program addresses organizational, technical, and social aspects through Express Start, Onboarding Learning Plans, and the RPN+ mentoring program. Aligned with the JTFCTC framework, and designed for broad implementation, it successfully promotes competency-based growth and optimizes time for both managers and employees.

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Design and establishment of a "big data" summer research program for medical students

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OBJECTIVES/GOALS: A summer research program for medical students was implemented using real-world evidence (RWE) –

electronic health record (EHR) databases to develop and answer research questions. Medical students were trained in capabilities of traversing the large RWE-EHR so they may query, extract, and analyze data as well as refine their research questions. **METHODS/STUDY POPULATION:** Ten medical students and 9 non-data scientist mentors underwent training in how to use the IU School of Medicine-Evansville RWEdataLab (CRC/Sidus Insights) national real-world cardiology and psychiatry deidentified EHR databases. The program began with students attending introductory training teaching database, spreadsheet, and statistical program usage. During the remainder of the program, a weekly best practices meeting took place among mentors and a weekly cohort meeting of students and mentors discussed student presented findings. At the end of the program, students generated abstracts and poster or podium presentations to share their findings at local symposia. A survey was also distributed to students to assess the impact of the tools, trainings, and program. **RESULTS/ANTICIPATED RESULTS:** All students were able to define a question of interest, query and extract data related to their research question, and analyze multiple aspects of their data. Projects were well received at local symposia, with 2 receiving special honors, and 2 projects have been presented at regional/national conferences. Students rated the program highly and were likely to recommend the program to other students. They self-rated improvements in asking scientific questions, using excel, data presentations, and problem-solving. Students valued weekly “check-in” meetings and interactions with mentors more than lectures or technical “help desk” support. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The program provides mechanisms for non-data scientists and medical trainees, to learn and access RWE-EHR databases to address research questions. The cohort interactions fostered discussion among mentors and students promoting research question refinement and clarity findings. The program also introduces a new tool for potential patient care.

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Engaging research professionals in organizational culture and climate initiatives

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OBJECTIVES/GOALS: Engage the research professional (RP) workforce in assessing job satisfaction, motivators, barriers, and levels of support throughout the research enterprise. The goal of this collaboration is to foster a positive culture, inform manager training, ensure RP retention, and enhance career mobility pathways. **METHODS/STUDY POPULATION:** Methods include a HR data compilation/analysis and focus groups for new RP's (RESULTS/ANTICIPATED RESULTS: This initiative will articulate the current culture and climate of the research enterprise and identify key strategic areas for growth. The UMN Clinical and Translational Science Institute (CTSI) will build off the design of an internal survey at Vanderbilt (2018) to encompass organization-specific challenges, the post-pandemic research landscape, and the UMass Diversity Engagement Survey. This process will also generate specific insights including RP sentiment statements, trends in how RP's describe their day-to-day work, assessment of barriers, analysis of retention benchmarks, and defining employee hopes/motivators. The CTSI will also identify salient RP growth opportunities, leadership competencies,

and areas of non-monetary compensation to improve satisfaction and career mobility. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Targeted interventions will be developed to address RP satisfaction barriers and leverage opportunities for KPI improvement. Results will be disseminated to managers, administrators, and the CTSI network. Resource development will include RP personas, job description/hiring templates, and strategic guides for key operational challenges.

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Creating a larger, more inclusive cohort to promote scholar engagement through the addition of an invited KL2 seminar fellows program

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OBJECTIVES/GOALS: The ITHS KL2 Seminar Fellows program creates a larger cohort by inviting additional early career faculty to join the tailored career development curriculum. The implementation of this program seeks to increase collaboration and innovation by amplifying diverse perspectives and increased networking. **METHODS/STUDY POPULATION:** In addition to the funded KL2 Scholars awarded each year, 13–15 Seminar Fellows are invited to be full participants in the KL2 curriculum, which includes monthly career development seminars and opportunities for feedback on their research. Invited Fellows are early career investigators who were promising KL2 applicants, faculty with alternative career development funding, and/or new underrepresented faculty in Washington, Wyoming, Alaska, Montana, and Idaho. Fellows commit to one year of participation, which can be renewed on a case-by-case basis. Fellows have been integrated into the ITHS implementation of Flight Tracker (Vanderbilt) to follow the career pathways alongside funded KL2 award recipients. **RESULTS/ANTICIPATED RESULTS:** The key measures of success will be the rate of seminar fellows transitioning into K-level or similar career development awards and securing other subsequent funding. Preliminary data demonstrates significant collaborations between KL2 Scholars with different areas of scientific inquiry and promotion of at least half of our past KL2 Scholars into leadership positions at prestigious medical schools in the USA and Canada. We suspect that the trends evidenced by the career progression of early KL2 recipients will be expanded into newer and different translational research projects with the addition of the KL2 Fellows program. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The Seminar Fellows program presents a cost-effective way to increase the impact of an existing career development program by amplifying cross-boundary interactions to form a strong, diverse translational research workforce.

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Empowering researchers for community collaboration

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