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Paying it forward: Establishing a faculty networking community through TRANSFORM Evolution

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OBJECTIVES/GOALS: Recognizing a critical need for sustained education and community beyond formalized training periods at Columbia University's NCATS-CTSA, we created the TRANSFORM (TRaining And Nurturing Scholars FOr Research that is Multidisciplinary) Evolution program to preserve the networks cultivated during the KL2 program. **METHODS/STUDY POPULATION:** We will provide an overview of the genesis, expansion, key components, and programming for the TRANSFORM Evolution program. The program is designed for current and alumni of the KL2 program and late junior faculty that receive our CTSA's Irving Scholar Award. TRANSFORM Evolution is a faculty and alumni network offering a platform to support the next generation of clinical and translational researchers while fostering a lasting community of collaboration and educational activities throughout a scholar's career lifespan. **RESULTS/ANTICIPATED RESULTS:** Salient components include the opportunities for social interaction, such as social/happy hours and member led education/career development sessions pertaining to topics that support thriving in an academic career. The program operates with financial resources and the support of a program manager. Evolution adopts a holistic, long-term approach, focusing on the entire professional lifespan by encouraging the development of enduring opportunities for our alumni. The program is intentionally structured to meet the evolving needs of its participants, through the beginning to more established phases in their professional careers. This continuity underscores the program's capacity to adapt and remain relevant, informing and supporting sustained career progression and scholarly productivity. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The program has been an instrumental adjunct in facilitating the transition to each career stage. By cultivating a community rooted in a common foundation – the KL2 and Irving Scholars programs, the program has created a robust support system that is crucial for the career development of clinician-scientists.

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Building inclusive research: A training program for CRP students and staff on equitable participant engagement, recruitment, and retention

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OBJECTIVES/GOALS: Clinical trial success requires recruiting and retaining diverse participants. The ER&R Certificate Program trains clinical research professionals (CRPs) in equity, diversity, and inclusion (EDI), addressing biases, and integrating regulatory knowledge

with practical skills to foster inclusive research practices. **METHODS/STUDY POPULATION:** An interdisciplinary Steering Committee, supported by Duke CTSA and DOCR, developed and implemented an engagement, recruitment, and retention certificate program (ER&R) for CRPs. With expert-led instruction, including e-learning, group sessions, and hands-on activities, ER&R integrates EDI into participant engagement practices. Participants complete 7 core courses and at least 3 elective courses, reflecting their unique responsibilities. Program evaluation uses the Kirkpatrick model to assess participant learning, competency, and EDI integration into clinical research. Since launch, the program has expanded to include clinical research trainees from Durham Technical Community College. All elements of the program were designed to allow for sharing across academic medical institutions. **RESULTS/ANTICIPATED RESULTS:** A total of 202 CRPs and trainees have participated since launch (2020), including 17 trainee participants from Durham Technical Community College (2022–2024). Post-program evaluations showed significant growth in recruitment and retention self-efficacy. An early evaluation of the first 2 cohorts (n = 59) included a self-assessment across defined competencies showing marked increases in comfort across all learning objectives, with notable gains in: Community and Stakeholder Engagement, Recruitment on a Shoestring Budget, Community-Engaged Research Initiatives, and Social Marketing. Participants valued the program's focus on EDI and sought more practical strategies and peer collaboration. 50 additional institutions have engaged with our implementation consultations and program repository. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Barriers to equitable ER&R exist at the individual, study, and system levels. Addressing these requires more intentional engagement practices. The ER&R certificate program is an innovative model for integrating equity principles with practical and required knowledge and skills training for participant-facing research professionals.

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A theoretical framework on the culture of interprofessional communication in healthcare

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OBJECTIVES/GOALS: The importance of interprofessional communication in healthcare is well documented. However, there has yet to be a theoretical framework for understanding this complex phenomenon. The purpose of this project was to develop a situation-specific theory about the culture of communication in the interprofessional healthcare setting. **METHODS/STUDY POPULATION:** We conducted individual virtual qualitative interviews with 16 healthcare professionals at different levels and from various disciplines. Participants were practicing clinicians at a tertiary care academic medical center. We transcribed audio-recordings of the interviews verbatim and aligned each transcript for accuracy, confidentiality, and representativeness. Data analysis was conducted using dimensional analysis, including open- and theoretical-coding utilizing an explanatory matrix for theory generation. **RESULTS/ANTICIPATED RESULTS:** Our findings produced a situation-specific theory on the culture of interprofessional communication in the healthcare setting. Participants described the environments in which they practiced in terms of hierarchical system

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) –