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Enhancing team collaboration through on-demand collaborative agreement training

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OBJECTIVES/GOALS: Collaborative agreements are vital for building strong partnerships, particularly during the formation of new research teams. To support team scientists during critical stages of team formation, we developed a flexible, on-demand eLearning module on collaborative agreements with examples and guidelines for developing tailored agreements. **METHODS/STUDY POPULATION:** The on-demand Collaborative Agreement module empowers learners to complete a full overview of collaborative agreement concepts or to directly access topics of interest within the module. Designed for real-time applications, it includes conversation prompts, downloadable templates, and example scenarios to guide team building and maintenance. To date, the module has been used by clinical and translational science trainees, early-career investigators, faculty participating in mentor training programs, and PIs of a multi-site research project. Early feedback has prompted the development of a consultative service to support teams in developing their own collaborative agreements after team members complete the module. **RESULTS/ANTICIPATED RESULTS:** We are collecting data through pre- and post-training assessments embedded within the module. Post-assessment also invites respondents to share contact information for follow-up evaluation of their adoption. As of October 2025, we have collected 21 pre-assessment responses and 14 post-assessment responses. We anticipate gathering more data prior to Translational Science 2026. We will summarize assessment data focused on the tool's effectiveness, learner's intention to adopt collaborative agreements, and their confidence in building their own agreements. Additionally, we will provide feedback on the value of support services post-training for team implementation of collaborative agreements. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The just-in-time online tool facilitates the use of collaborative agreements for individual learners, teams, and between mentors and mentees. It supports effective collaboration by clarifying shared expectations. Feedback for the module will inform enhancements as well as future translational science workforce development eLearning projects.

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Collaboration Planning & Research Jams: Evaluating feasibility, usability, and effectiveness of implementing Team Science interventions across 13 CTSA hubs

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OBJECTIVES/GOALS: Team Science is an essential element of Clinical and Translational Research (CTR), and a Translational Science Principle key for generating innovation. As CTSA hubs work to improve the practice of CTR through Translational Science, many

seek evidence-based interventions from the field of the Science of Team Science to make teamwork more impactful. **METHODS/STUDY POPULATION:** Two evidence-informed Team Science interventions were offered to CTSA hubs for implementation and evaluation: Collaboration Planning & Research Jams. Thirteen CTSAs signed up to implement Collaboration Planning; 12 implemented at least one session by the end of the project. Four CTSAs signed up to implement Research Jams; all implemented at least one session. Implementers, CTSA-based Team Science leaders, received training in intervention delivery. We collected pre-/post-implementation survey data on feasibility and usability of the interventions, as well as post-training satisfaction. We also collected post-implementation data to capture implementers' experience in delivering the interventions. Further, participants in each intervention were surveyed about their experience. **RESULTS/ANTICIPATED RESULTS:** Implementers agreed that the interventions were feasible and usable, while sharing challenges they encountered. Key challenges included limited buy-in from leadership and teams and the need for better marketing about the benefits of participation to increase uptake. Scheduling busy researchers was also a challenge. Implementers noted that the interventions aligned with their CTSA's Team Science goals and would help them provide additional support to teams. CP participants reported increases in understanding about their team processes and found the intervention to be both valuable and useful. Suggested improvements included longer, more personalized sessions. RJ participants agreed that RJs were helpful in surfacing shared ideas and requested additional resources to move the work forward post-session. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Team Science interventions can provide CTR teams with strategies that improve the conduct of CTR, while also serving the needs of CTSA-based Team Science leaders in facilitating more efficient and effective Team Science. Our data show the feasibility of implementing such interventions by providing training delivering team-based interventions.

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An ethnographic investigation into rural healthcare delivery and accessibility

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OBJECTIVES/GOALS: This pilot study uses an ethnographic analysis to examine provider knowledge, experiences, perception, and attitudes in delivering care in rural, primary care health professional shortage areas. **METHODS/STUDY POPULATION:** Ethnographic study relying on qualitative methods (semi-structured and open-ended interviews). Study population includes rural healthcare professionals (HCP), including physicians, physician assistants, nurses, dentists, therapists, and pharmacists. **RESULTS/ANTICIPATED RESULTS:** Anticipated Results: Understandings of why rural HCP choose to deliver healthcare in resource-limited communities, and how this figures into their knowledge, experience, attitudes, and perceptions. A focus on barriers as well as strengths of HCP practicing in rural, HPSA. HCP in rural settings often face distinct working conditions precipitated by resource limitations, which

may lead to higher levels of negative emotional or mental health conditions in comparison to their urban counterparts. This study will also attune to the extent to which their work, specifically as HCP in rural settings – as a SDOH – affects their mental health status. **DISCUSSION/SIGNIFICANCE OF IMPACT:** This research contributes to the literature on global health by examining HCP in relation to rurality and in resource-limited settings in the Global North. This will expand the current global health discourse beyond the Global South and bring much needed attention to the health and well-being of communities in the Global North.

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Purposeful partnering: Creating a regional partnership to enrich team science training for early-career investigators at two academic institutions

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OBJECTIVES/GOALS: Given the close proximity of two academic institutions with CTSAs, we piloted distinct training topics – psychological safety and evaluation of opportunities – with K and T scholars at both academic hubs. Each topic was originally developed and delivered by one of the partnering hubs, allowing for cross-institutional sharing of expertise. **METHODS/STUDY POPULATION:** The team science educators at both institutions had a series of conference calls to share information about the types of professional development activities offered to early-career investigators at respective institutions. Each group then agreed to offer a new workshop at the partner institution. Team 1 presented “Should I Join This Research Team? Strategically Evaluating a New Teaming Opportunity,” while Team 2 presented “Promoting a Positive Culture in Teams.” Our instructional goal was to deliver skills-based training that addressed opportunities and challenges unique to research teams. Each session incorporated interactive methods, including scenario analysis and discussion, think-pair-share activities, and short video clips. **RESULTS/ANTICIPATED RESULTS:** Likert-scale items and open responses will be completed by workshop participants before and after participating in the workshops. Attendees will evaluate their confidence in their perceived abilities related to workshop objectives and their perceptions of the utility and application of the content. In addition to the trainee evaluations, the two institutional teams completed a joint qualitative interview to provide feedback, discuss andragogical strategies to improve educational delivery and impact, and assess how to leverage the expertise of each team to provide future team science programming across the two institutions. Given that the workshops are scheduled to be completed by November 2025, the results will be collated and shared at

the Translational Science 2026 conference. **DISCUSSION/SIGNIFICANCE OF IMPACT:** We believe partnerships can work in a variety of settings and with multiple topics to enrich the experiences of both early-career investigators and team science educators at partnering hubs. The collaboration also promotes sharing of expertise, content, and resources across institutions which expands educational content across CTSAs.

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Integrated clinical and research ensemble program: A team science-based approach to optimizing collaboration, innovation, productivity, and cost savings while utilizing a novel funding mechanism

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OBJECTIVES/GOALS: In 2019, we began a novel team-science based research program aimed at producing more clinically relevant and practical patient-focused solutions, more quickly and efficiently. **METHODS/STUDY POPULATION:** We created a novel funding opportunity requiring broad multidisciplinary team participation, including patients, community members, and health system representatives. Inclusion of these non-traditional team members was required to help transcend long-standing research silos. Teams collaborated using team science principles. Successful teams were awarded a \$50K “line of credit,” limited to pre-approved expenditures for supplies, services, and staff – no salary support for research faculty. Teams were granted project manager support. Grant budgets were not required, and there were no project end dates. We tracked several research metrics to determine if this less restrictive funding mechanism led to more collaboration, efficiency, innovation, and productivity. **RESULTS/ANTICIPATED RESULTS:** From 2019 to 2024, 68 teams submitted proposals, and 29 teams were approved to receive a line of credit. Collectively, these teams submitted 43 extramural and intramural grant applications; of these, 11 applications were awarded, totaling \$15M. The average time to first grant submission for teams was 20.4 months, and the average time to first grant award start date was 33.8 months. The teams produced 69 total peer-reviewed publications, with an average time to first publication of 15.6 months. A comparison of publication rates found that team members, on average, experienced a 72% increase in monthly publication rates after teams were formed and funded. An analysis of output (return on investment) found that every dollar invested in these funded teams delivered \$21 in new grant funding. **DISCUSSION/SIGNIFICANCE OF IMPACT:** This novel funding mechanism, created at the Clinical and Translation Science Institute of Southeast Wisconsin, may facilitate increased productivity, conservation of research dollars, and broader multidisciplinary collaboration that leads to practical, effective, real-world patient solutions. Continued analysis of outcomes is planned.