POPULATION: CCTS manages service requests and investigator demographics through an in-house system that our evaluation program utilizes to report on service requests, investigator satisfaction, and investigator demographics to service groups, CTSA and campus leadership, and other stakeholders throughout the year. Through this system, we are able to regularly survey and interview investigators about their experiences and solicit feedback about the service process. During interviews, we focus on questions about receiving services, recommendations for CCTS and colleagues, and plans to work with CCTS in the future. This mixed-methods approach helps us lay the foundation to expand evaluation beyond reporting and establish a robust CQI program that focuses both on CCTS staff needs and improving investigator experiences. RESULTS/ANTICIPATED RESULTS: Soliciting both quantitative and qualitative feedback from investigators has enabled our service groups to make significant changes to their internal processes to ensure that investigators are aware of services and supports available. Our quantitative data show us that investigators return time and again to CCTS for services and supports. Yet the feedback we receive through short, targeted interviews also helps identify challenges that investigators experience that could improve the services they come to us to receive. We have already used this system to recommend improved marketing of existing services within certain service groups that were highly requested by investigators, which increased utilization of that service. DISCUSSION/SIGNIFICANCE OF IMPACT: Our mixed-method approach to evaluation allows us to easily and rapidly identify areas for improvement within our service groups, an instrumental part of implementing a CQI program that is focused on staff-identified areas of improvement. This approach can be easily replicated by other CTSA hubs with minimal impact to existing resources.

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Improving collaboration opportunities for implementation scientists conducting pragmatic trials and hybrid effectiveness-implementation trials

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OBJECTIVES/GOALS: Dissemination and implementation scientists often conflate or confuse pragmatic trials and effectiveness-implementation trial designs. This study evaluates the barriers and facilitators affecting these scientists' collaborative work to design, plan for, and conduct these different kinds of trials. METHODS/STUDY POPULATION: This is a sequential mixed-methods study. For the quantitative evaluation secondary data collection and surveys of roughly 200 investigators constituting an Implementation Science Network were carried out to identify research needs and impacts associated with the Translational Science Benefits Model. Surveys were prepopulated with respondents' grant awards and prompts to define the study designs being used. Interviews of respondents are being conducted to identify barriers and challenges they faced in conducting different implementation trials and to develop case studies of their resultant research agendas. A peer-reviewed interview protocol designed for Clinical and Translational Research Institutes to conduct case studies of translational research is being used for this qualitative evaluation. RESULTS/ANTICIPATED RESULTS: The 182 ISN members submitted 1590 research proposals since 2020, 52% of which were funded. ISN members responding to surveys (N = 30) self-identified many of these studies as being Hybrid 3 (29%), Hybrid 1 (17%), or Pragmatic trials (7%), although the largest proportion included studies classified "other" (33%), and some could not be classified (12%). Surveys of ISN members also indicated that many want to conduct pragmatic trials (36%) or hybrid trials (8%) but need more opportunities to collaborate (19%). Twelve (40%) ISN members agreed to be interviewed and another 11 (37%) indicated that they would do so in fall 2024 if available. Initial findings suggest that regular interactions with colleagues helped investigators new to the field understand how varied study designs could advance their implementation science. DISCUSSION/SIGNIFICANCE OF IMPACT: These findings will show how U-M implementation scientists collaborate to conduct implementation trials. If the kinds of barriers faced by investigators differs by trial type, research supports and initiatives can be tailored to better support all implementation scientists in the CTSA Consortium.

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The Translational Science Promotion and Research Capacity (T-SPARC) framework: Developing institutional capacity for translational science

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OBJECTIVES/GOALS: As translational science (TS) emerges as a field, there is a need for research organizations to understand how to develop capacity for and support the advancement of TS. To support such institutional and infrastructural change, this poster outlines a Translational Science Promotion and Research Capacity (T-SPARC) framework. METHODS/STUDY POPULATION: The T-SPARC framework was developed by members of the Duke University Clinical and Translational Science Institute (CTSI) primarily from CTSI Pilots, Team Science, Evaluation, and Administration, all of whom had identified the need for building institutional capacity for TS at our institution. The group reviewed literature on TS to ensure grounding in current knowledge, drafted an initial TS logic model, and then determined the value of developing a framework addressing building TS institutional capacity. The group then identified other frameworks/models related to behavioral, organizational, and system change; examined scholarship addressing the building of research capacity in colleges and universities; and iterated on a TS-focused framework in multiple working sessions. RESULTS/ANTICIPATED RESULTS: The resultant T-SPARC framework provides a foundation to 1) inform the development of interventions and programs advancing TS and 2) evaluate their effectiveness. It outlines: organizational levels for TS capacity building (large-scale systems, research institutions, teams, and individuals); intervention activities (policies and processes, funding, collaboration and partnership, and training); proximal outcomes (knowledge/attitudes, behaviors, resources/infrastructure, and connections); next-stage outcomes (e.g., interdisciplinary team processes, and research infrastructure); and ultimate goals (fewer translational impediments, improved public health, and health equity). It ingrates TS principles as foundational to, and outcomes of, capacity-building efforts. DISCUSSION/SIGNIFICANCE OF IMPACT: T-SPARC, as a framework for building capacity in TS, provides added foundation for advancing the conceptualization

https://doi.org/10.1017/cts.2024.885

and practice of TS. Ultimately, T-SPARC seeks to advance broader goals of reducing longstanding challenges in the translational research process and improving health outcomes.

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Evaluation of the effect of probiotic *E. coli* Nissle 1917 on *Campylobacter jejuni* infections

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OBJECTIVES/GOALS: *Campylobacter* is a foodborne pathogen, causing gastroenteritis in humans. Untreated infections can cause colorectal cancer. With rising antibiotic resistance, alternative therapies like *E. coli* Nissle 1917 (EcN) are urgently needed to control infections in humans. Our study aims to evaluate the effect of EcN supernatant on *C. jejuni* in vitro. METHODS/STUDY POPULATION: The efficacy of EcN CFS on the growth of *C. jejuni* was evaluated in LB and minimal media (M63) using agar-well diffusion assay. We also evaluated the impact of these supernatants on the biofilm formation and pre-formed biofilms, as well as on the adhesion, invasion, and survival of *C. jejuni* in human colorectal adenocarcinoma cells. Additionally, we examined the effects of EcN CFS on the expression of genes associated with virulence factors, biofilm production, and quorum sensing of *C. jejuni* using real-time polymerase chain reaction. Each of the experiments was repeated at least twice, and the results were evaluated using two-way analysis of variance. RESULTS/ANTICIPATED RESULTS: Our results showed that EcN supernatants grown in both LB and M63 media exhibited a high zone of growth inhibition of *Campylobacter* in agar media. The EcN CFS significantly inhibited *C. jejuni* growth when co-cultured in liquid media. The supernatants also demonstrated a significant reduction of pre-formed biofilms by up to 82% and inhibited biofilm formation by 75%. Pretreatment of HT-29 MTX human intestinal cells with EcN supernatants led to a significant (p DISCUSSION/SIGNIFICANCE OF IMPACT: Our study demonstrates that *E. coli* Nissle 1917 cell-free supernatant significantly inhibits *C. jejuni* growth and virulence. This suggests that EcN-derived bioactive compounds could be promising antibiotic alternatives to combat *C. jejuni* infections. This study will bridge the gap between basic and translational research.

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An environmental scan of translational science storytelling in a Clinical Translational Science Award Hub

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OBJECTIVES/GOALS: This study illuminates the efforts of a Clinical and Translational Science Award (CTSA) Hub to share stories of its aspirations, challenges, successes, opportunities, and impact when pursuing its complex goals, and how storytelling contributes to the narrative of the translational science work (via storytelling strategies, products, and benefits). METHODS/STUDY POPULATION: We utilized an environmental scan of a CTSA Hub (University of Minnesota Clinical and Translational Science Institute (CTSI)), including case study vignettes of its storytelling practices and products. We triangulated data from diverse data sources: grant applications, reports, and publications; public stories/news related to CTSI activities and impact; scientific publications; organizational/policy documents; and interviews with CTSI stakeholders featured in published sources. RESULTS/ANTICIPATED RESULTS: TS storytelling uses and strategies include communicating the essence of research translation, promoting program utilization, engaging community, reporting to stakeholders, and evaluating for accountability, learning, and improvement. Storytelling challenges include complexity of translation; balancing the scientific rigor with an engaging narrative; identifying appropriate stories that resonate with diverse stakeholders and are at an appropriate level of maturity; and building capacity using storytelling. Facilitators include supportive infrastructure to integrate stories; leadership endorsement of storytelling as a valuable strategy; capable cross-functional teams of communicators, administrators, and researchers to facilitate the integration of data into storytelling. DISCUSSION/SIGNIFICANCE OF IMPACT: The environmental scan provides evidence and lessons learned on leveraging storytelling as a useful tool for communicating CTS goals, actions, and findings, engaging stakeholders, building a narrative around scientific discoveries, evaluating and improving programs, and addressing health disparities in translational science.

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Optimizing the transition of cancer survivorship care from oncologists to primary care providers (PCP)

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OBJECTIVES/GOALS: Aims are to identify the gaps and discrepancies between cancer care teams at Princess Margaret (PM) and primary care providers (PCPs). To ensure the transition from hospital care at PM into the community integrates the expressed needs of PCPs and cancer specialists. To ensure PCPs have the necessary resources to provide high-quality care to patients. METHODS/STUDY POPULATION: Phase 1 is the preparation phase, which consists of searching the literature and conducting contextual inquiry with experts in relevant fields, such as cancer survivorship and primary care. This phase is crucial to the planning of this project as the information gathered will be used to define the problem space and outline the scope of the project. Next (phases 2 and 3) we aim to create and distribute surveys to PCPs to gather data on current protocols and resources. We plan to distribute this survey by emailing PCPs and accessing PCP networks. Upon completion of the survey, we will review the data and assess which areas need further investigation. Then, we will create an interview guide keeping in mind the areas that need to be supplemented and aiming to validate the need. RESULTS/ANTICIPATED RESULTS: A resource that presents

https://doi.org/10.1017/cts.2024.885