

support from a CTSA Program grant. The unique publications identified by QVR were used to construct an Altmetric Explorer report. We examined the relationship between the AAS and other variables, including number of authors, number of grants supporting the publication, number of CTSA program institutions supporting the publication, and if the publication included group authorship. RESULTS/ANTICIPATED RESULTS: Our analyses confirmed that the Program indeed supports potentially high impact research, as indicated by the highest scoring papers, across a wide range of diseases and conditions. Nearly all the highest scoring papers were focused on a specific disease or condition rather than broader methodological research, despite the disease-agnostic focus of the CTSA program. We also found that the Program significantly contributed to critical research on the once-in-a-century COVID-19 pandemic. We confirmed the entire CTSA consortium is contributing to potentially high impact research, with all institutions represented in the highest scoring publications. DISCUSSION/SIGNIFICANCE OF IMPACT: Understanding the impact of the CTSA Program presents a unique challenge – the program supports biomedical research infrastructure and training programs whose outcomes and impact can be difficult to track or measure. These data offer early signals of impact and can assist evaluators with designing future evaluations.

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### **Expanding access to perinatal trauma care: Evaluating the perinatal narrative exposure therapy (PNET) training for interdisciplinary providers\***

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OBJECTIVES/GOALS: Posttraumatic stress disorder (PTSD) is common during pregnancy and postpartum, leading to adverse birth outcomes. Despite effective interventions like narrative exposure therapy, PTSD often goes untreated due limited training opportunities and lack of community support. Expanding training for PTSD is crucial to improving access to care. METHODS/STUDY POPULATION: Six 3-day PNET trainings were delivered to 57 participants over a 23-month period. Workshop attendees represented a variety of professions (19% Social Workers, 19% Mental Health Graduate Trainees, 18% Psychologists, 18% Counselors, 12% Doulas, 11% Physicians, and 5% Home Visitor/Parent Educators) with varying levels of specialty experience from diverse locations (2 countries and 13 states). Key workshop outcomes included participant one-week post-workshop satisfaction, perceptions of acceptability, appropriateness, and feasibility of the intervention, and pre- to one-week post-workshop perceptions of connectedness to trauma treatment and perinatal healthcare communities. Data will be explored at 6 months post-workshop to evaluate longer-term effects on connectedness. RESULTS/ANTICIPATED RESULTS: The majority of workshop attendees (84%,  $M = 4.76$ , range 1–5) reported being “extremely satisfied” with the training and 98% indicated they would “recommend it to others.” Most attendees found NET to be acceptable ( $M = 4.64$ , range = 1–5), appropriate ( $M = 4.37$ , range = 1–5), and feasible ( $M = 4.49$ , range = 1–5) to use within their practice. Paired t-tests revealed a significant increase in a sense of connectedness to both the trauma treatment and perinatal healthcare communities from pre- to post-workshop. DISCUSSION/SIGNIFICANCE OF IMPACT: Findings indicate that the PNET workshop is feasible and effective in training interdisciplinary providers on perinatal PTSD evidence-based interventions. By training

a range of professionals and fostering a sense of connectedness, the PNET workshop has the potential to make effective trauma treatments accessible to underserved populations.

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### **Root cause analysis of barriers and facilitators to accrual to a pragmatic, EHR-embedded clinical trial**

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OBJECTIVES/GOALS: Electronic health record (EHR)-based recruitment can facilitate participation in clinical trials, but is not a panacea to trial accrual challenges. We conducted a root cause analysis to identify EHR-based accrual barriers and facilitators in a pragmatic randomized trial of metformin for those with prostate cancer and glucose intolerance. METHODS/STUDY POPULATION: We quantitatively analyzed enrollment drop-offs among eligible patients who either did not complete a consent (with analysis of EHR-embedded consent process) or who completed a consent but were not enrolled (with analysis of EHR implementation of a Best Practice Alert). We summarized data from the EHR by eligibility, provider encounters, and alerts, and generated CONSORT diagrams and tables to trace the enrollment pathway. We supplemented quantitative findings with a thematic analysis of semi-structured individual interviews with eligible patients ( $n = 10$ ) and study providers ( $n = 4$ ) to identify systematic barriers to recruitment and enrollment of eligible patients. RESULTS/ANTICIPATED RESULTS: CONSORT diagram analysis found that 24% of potentially eligible patients (268 of 1130) had an eligible study encounter but were not enrolled. Additionally, BPAs were not triggering for some eligible patients. Interviews revealed that study providers wanted more detailed information about which study arm their patient would be assigned to, and about next steps after enrollment, especially relating to additional lab tests and follow-up care needed. Patient interviews suggested that patients often did not remember completing the consent process and felt overwhelmed with appointments and information; patients expected providers to actively bring up research opportunities during appointments. DISCUSSION/SIGNIFICANCE OF IMPACT: While pragmatic EHR-embedded trials are often characterized as lower-burden, these trials still require active engagement by providers, as well as ongoing attention from both research and informatics teams to ensure that EHR-embedded processes are functioning as designed, and that they are effective in recruiting study participants.

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### **Mixed-method approaches to evaluating UIC's CTSA Hub**

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OBJECTIVES/GOALS: The University of Illinois Chicago's Center for Clinical and Translational Science has implemented an innovative approach to program evaluation. We blend high-impact quantitative and in-depth qualitative approaches to identify local and national impacts and areas for improvement that are not captured solely by traditional quantitative methods. METHODS/STUDY

**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