

Research, Department of Physical Medicine and Rehabilitation, University of Michigan

**OBJECTIVES/GOALS:** We evaluated the implementation of a peer-facilitated research best practices training for Community Health Workers and Promotoras (CHW/Ps) at four new partner sites to increase the capacity and capability of a workforce increasingly involved in community-engaged research. **METHODS/STUDY POPULATION:** Staff were trained using a train-the-trainer model, and materials were disseminated to partners at three academic institutions and one community-based organization. Each site delivered the training virtually or in-person in English and/or Spanish. CHW/P learners at all sites completed online evaluation surveys about the impact of the training on their knowledge and skills for participating in research-related work, and two CHW/Ps from each site participated in follow-up interviews to gather feedback about their experiences. Staff completed fidelity monitoring, follow-up interviews, and three brief surveys regarding feasibility, acceptability, and appropriateness of implementing the training. **RESULTS/ANTICIPATED RESULTS:** The four sites conducted six trainings with a total of 42 CHW/Ps. Two sites each conducted one in-person training in English while the other two sites each conducted two virtual trainings, one in English and one in Spanish. Staff noted facilitators to successful implementation, including providing a facilitator guide and course materials in both languages and tips sheets for navigating REDCap; using the train-the-trainer model; and compensating CHW/P learners for attendance. The primary barrier noted was not having a budget for in-person trainings (e.g., refreshments, printed materials). CHW/P learners reported positive experiences with few suggestions for improving the training. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Preliminary results suggest the research best practices training for CHW/Ps is feasible, acceptable, and appropriate for implementation by partners at academic institutions and community-based organizations, regardless of language (i.e., English or Spanish) or delivery (i.e., virtual or in-person).

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### **A Clinical and Translational Science Awards (CTSA)-specific method to differentiate between translational science and translational research**

Kelsey Stoltzfus, Alyson Eggleston and Jennifer Kraschnewski  
Penn State Clinical and Translational Science Institute

**OBJECTIVES/GOALS:** Our goal was to develop a method for creating a streamlined, Clinical and Translational Science Awards (CTSA)-specific translational science scoring rubric to be used to differentiate between translational science and translational research projects during the pilot proposal review process. **METHODS/STUDY POPULATION:** We created a survey using the 24 Translational Science Principle-based questions sourced from Schneider et al.'s 2023 manuscript in JCTS. Survey respondents were asked to rank the questions from 1 to 24, with "1" being the question that is the most impactful for defining translational science at Penn State. The survey was distributed to our CTSA staff, faculty, and

leadership who are well-versed in translational science across all CTSA Cores. The rankings were averaged per question. The five questions with the most impactful average score were selected to be used to evaluate translational science at our CTSA. **RESULTS/ANTICIPATED RESULTS:** Nine individuals, including faculty, staff, and leadership, across five CTSA Cores completed the survey. The average ranking scores ranged from 6.1 to 20.3. The top five ranked items represented the following four Translational Science Principles: generalizable solutions, efficiency and speed, focus on unmet needs, and cross-disciplinary team science. Importantly, these five items and corresponding translational science principles reflect our CTSA priority areas, the infrastructure support we provide, and the translational research activities conducted at our CTSA. For example, team science is highlighted throughout our CTSA programming, including mini presentations during our CTSA meetings. **DISCUSSION/SIGNIFICANCE OF IMPACT:** This method allows CTSA teams to reflect on their institutional work and share Core-specific perspectives of translational science. This CTSA-specific rubric allows for streamlined translational science pilot proposal evaluation in alignment with site specific CTSA mission and vision.

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### **Physical therapy utilization among WTC Health Program members with cancer**

Kevin Pressley, Albeliz Santiago-Colón and Shantel Barnes  
Centers for Disease Control and Prevention

**OBJECTIVES/GOALS:** Physical therapy (PT) is a recognized and evidence-based component of oncology care that has been shown to benefit people with various cancers, such as breast, lung, head and neck, thyroid, or prostate cancer. The goal of this evaluation was to determine the level of PT service utilization by World Trade Center (WTC) Health Program members with cancer. **METHODS/STUDY POPULATION:** The Program is a limited benefits federal program that serves responders and survivors of the September 11th attacks in New York City, the Pentagon, and Shanksville PA. Our analyses include enrolled Program members with a cancer certification. Cancer types were divided into two categories, Category A (breast, lung, head and neck, thyroid, or prostate cancer) and Non-Category A (all other cancer types). Data included medical claims, certification, and enrollment data from July 2011 to December 2023. The 2023 Current Procedural Terminology (CPT) code list from the Centers for Medicare and Medicaid Services were used to identify claims associated with PT interventions. Our analyses describe trends in PT claims, CPT codes, cancer certifications by subtype, and number of members with Category A cancers and PT claims. **RESULTS/ANTICIPATED RESULTS:** Since the Program's inception in 2011, PT claims had gradually increased except for in 2020 when there was a sudden decrease, most likely due to the interruption of in-person services due to the COVID-19 pandemic. From 2021 to 2023, PT claims began to increase again. The most common types of PT interventions were therapeutic exercises, manual therapy, and neuromuscular reeducation. In 2023, the most recent year of full data available, Category A cancers made up 38% of all

cancer certifications, with prostate and breast cancer being the most common. Category A cancers were evaluated together due to prior existing evidence outlining significant benefit from PT intervention. In total, Category A cancers represent over 14,000 Program members. Less than 1% of members with a Category A cancer had a PT related claim in 2023. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The mission of the Program is to provide quality and compassionate medical care and treatment to our members. Better understanding the utilization of PT services provided by the Program will allow us to increase awareness and support of interventions for members of our Program who could benefit from PT services.

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### **Evaluation of the characteristics and impact of the NCATS CTSA Program pilot translational and clinical studies**

Munziba Khan, Heather Baker, Andie Vaught, Monica Donerson and Robin Wagner

<sup>1</sup>National Center for Advancing Translational Sciences/National Institutes of Health

**OBJECTIVES/GOALS:** To fully understand the scientific objectives, overall financial commitment, and outcome of the pilot projects. **METHODS/STUDY POPULATION:** We evaluated pilots reported in the in the annual, interim, and final Research Performance Progress Reports (RPPRs) for Clinical and Translational Science Awards (CTSA) Program UM1 and UL1 grants from FYs 2021–2023 to assess research categories across the translational science spectrum. We analyzed the number of pilots involving human subjects, vertebrate animals, both, or neither; financial allocations; publication outputs; and other characteristics. Pilots reported across multiple years were deduplicated and assigned to the latest reporting year. Each pilot was classified into broad (Category 1) and specific (Category 2) areas. Descriptive statistics, including means and frequency distributions, were generated. Multi-year pilots with NA or 0 values used the most recent prior value. **RESULTS/ANTICIPATED RESULTS:** In the period from FY 2021 to 2023, 61 hubs reported 1,811 unique pilot projects in their RPPRs, receiving a total of approximately \$62 million, of which two-thirds were expended. On average, each hub conducted 30 pilots with an award size of about \$35K. Just over half of the pilots involved human subjects research (HSR), while about one-third were neither HSR nor vertebrate animal studies (VAS), with the remaining focused primarily on VAS. Notably, only 13% of pilots resulted in peer-reviewed publications. Collaborative efforts were observed in one-third of the projects. The majority of pilots fell into Preclinical Research (46%), followed by Clinical Research (33%) and Public Health (20%). Limitations in data quality were identified, and ten pilots reported \$0 awarded funds, which may be captured in future RPPRs. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Analysis of pilots reported in RPPRs from FYs 2021–2023 across 61 hubs shows a strong focus on HSR, highlighting collaborative efforts that enhance translational science and align with CTSA goals. Future analysis will help assess the pilots' impact and their alignment with NCATS' mission to expedite research translation into health solutions.

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### **MICHR redesign of evaluation services to foster increased CTS**

Ellen Champagne<sup>1</sup>, Elias Samuels<sup>1</sup>, Sarah Miles<sup>1</sup> and Maureen Brudzinski<sup>1</sup>

<sup>1</sup>University of Michigan, Michigan Institute for Clinical and Health Research

**OBJECTIVES/GOALS:** The demands on MICHR's Evaluation team are profuse and varied. Quarterly team meetings were used to keep track projects, identify new projects, and relay important new initiatives from MICHR leadership. The MICHR Translational Innovation team took on the task of assessing the Evaluation team's processes to design better workflow and effectiveness. **METHODS/STUDY POPULATION:** The process included 5 stages, Empathize, Define, Ideate, Prototype and Test. Sixteen interviews were conducted with MICHR faculty and staff. Interviews were coded and summarized. Seventeen themes were mapped and distilled into 5 key insights. From the key insights, design principles were identified to guide a design session with Translational Innovation staff and Evaluation staff. New work processes were proposed, designed, and tested by both teams. The Evaluation team "test-drove" the prototype and iterative design sessions were conducted to determine which new elements were successful. The Evaluation team was positioned to begin utilizing the newly designed process at the beginning of MICHR's new grant year. **RESULTS/ANTICIPATED RESULTS:** The MICHR Evaluation team is instrumental to the development, conduct, and dissemination of Clinical & Translational Science (CTS), a primary objective of MICHR's work. Three types of evaluation projects were identified through the design process: required reporting, CQI/program improvement, and CTS/impact evaluation. The service design process enabled the Evaluation team, and MICHR program leads to better identify and prioritize collaborations between the Evaluation and program teams that improved the quantity and quality of MICHR CTS outputs. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Generating CTS is critical to the missions of NCATS and MICHR. Thoughtfully designing processes that facilitate and increase CTS output that can be shared and duplicated across the consortium is invaluable.

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### **Developing a framework for prioritizing evaluation and CQI methods at the University of Cincinnati CTSA Hub (CCTST)**

Brittany Rosen<sup>1</sup> and J Tharrington<sup>2</sup>

<sup>1</sup>Cincinnati Children's Hospital Medical Center and <sup>2</sup>University of Cincinnati

**OBJECTIVES/GOALS:** In alignment with the Clinical and Translational Science Awards (CTSA) UM1, continuous quality improvement (CQI) needs to be integrated into the elements and hub evaluation. As a first step to operationalizing this process, the University of Cincinnati hub (CCTST) evaluation team developed a systematic approach to prioritizing and sequencing tasks for aligning evaluation methods with CQI. **METHODS/STUDY POPULATION:** A scoring sheet was developed to provide a