

RESULTS/ANTICIPATED RESULTS: A total of 134 investigators comprised the overall network. The network are predominantly clinician (49.3%) and basic researchers (25.4%). Preliminary results shows that diversity of disciplines and affiliations in the collaborative relationships increased across time. Findings demonstrated that the number of nodes/actors increased from 16 to 65 comparing 2020 to 2023 and the edges/relationships from 12 to 53. The number of translational research cluster increased from 4 to 13 comparing 2020 to 2023. More extensive collaborative cluster occurred across time with over 15 researchers collaborating. A mentor was the key player connecting these research clusters. **DISCUSSION/SIGNIFICANCE:** This study provides critical data to mapping the IDEa CTR translational research collaboration patterns. Research collaboration increased across time. This innovative approach serves to foster data-driven decision-making to enhance collaboration, diversity, and program outcomes. It offers valuable insights for policy and practice.

182

Secondary Use of Electronic Health Record (EHR) Data and Implications for Evaluation

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OBJECTIVES/GOALS: An academic medical library evaluated an EHR data abstraction service by assessing uptake and publication metrics, including use by department, purpose of data abstraction requests and publication counts. **METHODS/STUDY POPULATION:** The evaluation included 167 requests for EHR data processed by the institution's clinical research data management unit (CRDMU) and recorded in an intake form hosted on REDCap. These requests originated from various departments. The intake forms collected investigator and study information, as well as request completion dates. Information in the intake forms were matched with publications and meeting abstracts that were indexed in a database of faculty publications. Investigators who submitted EHR data requests that could not be readily matched to publications were contacted to verify the status of their studies and any associated publications. **RESULTS/ANTICIPATED RESULTS:** The evaluation included 167 data requests submitted to the CRDMU between 2016 and 2018. These requests were categorized into the following use cases: retrospective studies (n=93); patient recruitment (n=50); and 'other' (i.e., education, training, or process improvement; feasibility assessments; machine learning (n=14)). By the end of the evaluation period, an average of four years after the data requests were submitted to the CRDMU, 60 of all 167 EHR datasets (35.9%) led to publications as articles or meeting abstracts. 64.5% of the EHR datasets requested for retrospective studies, 56% of the datasets requested for recruitment, and 79.1% of datasets requested for other uses did not lead to publications. **DISCUSSION/SIGNIFICANCE:** These findings offer evidence that bibliometrics alone provide limited insight into the value of services and data utilized for secondary research. Data ecosystem stakeholders are encouraged to consider—and develop—scalable, reproducible, and more holistic assessments of the impact of their services.

183

Translational Health Informatics Support Service Practices, Challenges, and Facilitators

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OBJECTIVES/GOALS: **METHODS/STUDY POPULATION:** Utilized novel TS evaluation methods and tools: - Translational Science Case Study protocol adapted to examine translational support service practices, barriers and facilitators influencing translational movement. - Translational Science Benefits Model (TSBM) Checklist elements for translational/research impact analysis. Triangulated diverse data sources: - Primary data: semi-structured interviews with translational service stakeholders. - Secondary data: service's applications, reports, and publications; public stories/news related to their research support; scientific publications; organizational/policy documents; and interviews with research stakeholders featured in published sources. **RESULTS/ANTICIPATED RESULTS:** Translational challenges include: complexity and constant change of health data; lack of data/informatics literacy amongst researchers; limited appreciation and funding for research data services; silos of functionality and data related to biomedical informatics. Translational facilitators are: the UMN CTSA support; available infrastructure and knowledge base; researchers as the best promoters for services; multidisciplinary collaborations with research/community/healthcare teams; best practice approaches; and learning by doing. The translational/research support service contributes to community and public health, clinical/medical benefits, data literacy, catalyzing data-rich research, and health equity. **DISCUSSION/SIGNIFICANCE:** The evaluation case study provides evidence and lessons learned related to translational benefits, challenges, and facilitators of a successful translational research support service integrating best informatics practices in clinical research and contributing to health equity improvement.

185

A Clinical and Translational Science manuscript writing support program for research staff

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OBJECTIVES/GOALS: The objective of this initiative was to promote MICHR staff's production of Clinical and Translational Science publications. MICHR leadership approved this initiative, including an evaluation plan with measurable outcomes goals, and contracted with an experienced scientific writing coach with over 20 years of experience working with CTSA's. **METHODS/STUDY POPULATION:** A sequential mixed methods program evaluation designs was used. Pre- and post-surveys were used to measure participating staff's gain in skill, understanding & satisfaction. An interview with the instructor was then conducted to characterize staff performance, and identify possible areas of programmatic

improvement. This initial phase of the program evaluation was conducted in the Summer of 2023. The results were used to inform an expansion of the program to include more staff in the the Fall of 2023. Pre- and post-program surveys of the participants were conducted and interviews with each program participant were conducted. Finally, interviews with non-participating staff were conducted to assess their need for writing support and the challenges and facilitators of their scientific writing. **RESULTS/ANTICIPATED RESULTS:** Preliminary evaluation results obtained in the summer of 2023 were positive. All participants completed the course, and spent an average of 3.3 hours working between sessions. Six manuscripts were developed, five of which are being readied for submission and one submitted as of August 2023. Analysis of the pre-and post-program surveys indicated that all participants gained writing skill and authorship knowledge. Specifically, they gained confidence in 7 writing skills and 6 first-author roles evaluated during the course. All participants were satisfied with their experience and recommended the course to their colleagues, and the course instructor was also satisfied with the course. However, the participants noted that competing work demands and variable preparation hindered their work in the course. **DISCUSSION/SIGNIFICANCE:** With the increasing focus on Clinical and Translational Science taking place across the CTSA Consortium it is important to involve research staff in paper writing teams, including in first-author roles. Professional development in scientific writing can support Clinical and Translational Research staff contributing to this emerging science.

186

Variances in Implementation Fidelity of a Play Promotion Program among Diverse Language Families: An Observational Analysis of a Multi-Site Case Study

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OBJECTIVES/GOALS: Research emphasizes the importance of play in early childhood to support social, emotional, and physical development. This study explores how the Prescription for Play (P4P) is executed in clinical contexts by analyzing implementation fidelity and contextualizing the adaptations, challenges, and facilitators to the program's functionality. **METHODS/STUDY POPULATION:** This project is an ongoing multi-site case study. At the time of study completion in December of 2023, there will be over 40 clinical observations of pediatric well-child check (WCC) visits completed across 7 Federally Qualified Health Centers (FQHC) participating P4P, a play promotion program wherein providers discuss the importance of play in WCC visits and provide a free play kit. All visits are with children 18-36 months old, with a broad demographic spread across sites. Observations are recorded through a guided observation protocol informed by a standard implementation fidelity framework, conducted by 5 researchers. Through inductive thematic analysis, this study will analyze observations of WCC visits to understand the ways providers engage with P4P across sociocultural contexts within FQHCs. **RESULTS/ANTICIPATED RESULTS:** Preliminary analysis of clinic observations (N = 30) indicates the degree of implementation fidelity varies

across sites, with particular variances between WCC visits conducted in English versus non-English languages (NEL). In NEL visits, there were discrepancies among indicators of quality of delivery and participant responsiveness. NEL visits were less likely to have the provider model play with the caregiver and far less likely to open the play kit given to the family. Providers in NEL visits were also less likely to discuss certain benefits of play like brain development and reduced screen time. Across all observations, providers "prescribed play" approximately half the time. As more observations are conducted, researchers anticipate seeing continued differences between English and NEL visits. **DISCUSSION/SIGNIFICANCE:** From preliminary analysis, discrepancies in implementation fidelity indicate the P4P intervention may require adaptation and additional training related to how to prescribe and discuss play in WCC visits conducted in NEL visits. Additionally, this study elucidates the impact language can have on the fidelity of clinical interventions.

187

Translating for Impact: a free online toolkit for demonstrating the larger impact of your work

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OBJECTIVES/GOALS: The Translational Science Benefits Model offers an approach for evaluating the downstream health and social impact of research. Using the new Translating for Impact Toolkit of nine web-based tools, researchers can create free, secure accounts to plan, track, and demonstrate the impact of their work. **METHODS/STUDY POPULATION:** Development of the online toolkit includes 6 phases: 1) Review of existing tools, 2) Development of fillable PDF tool prototypes, 3) Pilot testing, 4) Development of web-based tools, 5) Usability testing, and 6) Refinement of web-based tools. First, we reviewed existing tools for measuring research impact. We then created prototypes of nine tools, published on the TSBM website, and pilot tested with researchers. Based on feedback and testing, we developed and launched web-based versions of the tools. We are currently conducting usability testing with researchers, which we will use to evaluate the ease-of-use and quality of the tools, identify areas for improvement, and refine the tools. **RESULTS/ANTICIPATED RESULTS:** Researchers can sign up for user accounts, create projects, invite collaborators and program administrators, and save progress as the complete the nine tools in the Translating for Impact Toolkit. The tools are divided into three steps: Plan (Roadmap to Impact, Benefits 2x2, Partner Mapper, and Team Manager), Track (Impact Tracker), and Demonstrate (Product Navigator, Case Study Builder, Impact Profile, and Dissemination Planner). The toolkit also includes a dashboard that provides a quick snapshot of translational impact for each project. The toolkit will help both individual translational scientists demonstrate the impact of their work and CTSA hubs evaluate impact of their projects. **DISCUSSION/SIGNIFICANCE:** The TSBM online toolkit is a free, secure, easy-to-use platform researchers can use to plan for, track, and demonstrate the impacts of their work. The toolkit provides a structured process that will help the next generation of scientists prioritize and promote translational impact in their work.