via AI prompts will likely result in optimized, error-free data, ensuring compliance with regulations. The use of genAI for creating IRB consent forms from grant documents should significantly streamline the IRB approval process, reducing preparation time and administrative burdens. Thematic analysis of CTSA aims by AI will provide deep insights into historical trends and recurring themes, aiding in strategic planning. AI-assisted study design tools are anticipated to optimize sample estimation, protocol development, and advance the quality of clinical research administration. DISCUSSION/SIGNIFICANCE OF IMPACT: The significance lies in enhancing efficiency, accuracy, and quality in clinical research administration. By streamlining processes, reducing errors, and providing strategic insights, AI supports the CTSA mission to accelerate translational research, thus improving public health outcomes and scientific innovation.

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Uncovering bias in digital recruitment for neurologic research: Demographic and socioeconomic influences on participant engagement

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OBJECTIVES/GOALS: Digital recruitment can improve participant engagement in medical research, but its potential to introduce demographic and socioeconomic biases is unclear. This study investigates pathways participants took during a digital recruitment workflow in neurology, examining potential associations with socioeconomic and demographic factors. METHODS/STUDY POPULATION: As part of an ongoing study aiming to remotely capture speech from patients with neurologic disease, most participants seen in neurology on our campus are invited to complete a self-administered speech examination. We exported participant data from Epic (semi-automated identification and invitation), Qualtrics (eligibility screening), the participant tracking database (consent), and the recording platform (completion) for March to July 2024. Data visualization was performed using a Sankey diagram. Socioeconomic status was assessed using the housing-based socioeconomic status (HOUSES) index and area deprivation index (ADI) national rank. Kruskal–Wallis and Wilcoxon rank-sum tests were used to compare the median age, socioeconomic indices, and time taken to reach different steps of the study. RESULTS/ANTICIPATED RESULTS: Of the 5846 invited participants, 57% were from urban areas, 23% from rural areas, and 20% from urban clusters. Most did not read/respond (2739) or declined (1749) the initial invitation via Epic. Of the 1358 interested participants, 415 completed the study. Participants from urban areas completed enrollment steps faster than those from rural areas and urban clusters, though the variance was large (42.6 ± 41.4 days vs. 50.6 ± 42.2 days and 50 ± 43.9 days, respectively; $p = 0.030$). Female participants took longer to complete enrollment than males (48.7 ± 44 days vs. 40.5 ± 38.8 days; $p = 0.026$). Participants who successfully finished the study had significantly lower ADI national ranks compared to other common pathways (40.6 ± 19; $p = 0.0021$). No associations were found with the HOUSES indices. DISCUSSION/SIGNIFICANCE OF IMPACT: Our findings support differences in participant engagement, with urban participants and males more likely to complete enrollment steps. Those who finished the study were less disadvantaged suggesting potential bias in digital recruitment. These findings can inform strategies to improve digital recruitment in neurology research.

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Translational science in practice: A case study of the clinical research support center's collaborative model

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OBJECTIVES/GOALS: Conduct an evaluation of the Clinical Research Support Center (CRSC) model using a structured methodology, leverage insights to drive continuous improvement and evolution, and broadly disseminate outcomes to promote knowledge sharing and best practices for similar translational science initiatives. METHODS/STUDY POPULATION: We will utilize a structured case study approach, including adapting a translational science case study evaluation approach to assess impact as well as support practices, barriers, and facilitators that influence research translation. We will collect data from diverse sources. Primary data will come from structured interviews with stakeholders and a survey of a random sample of faculty and research staff. Secondary data includes grant applications, reports, and publications; public stories/media related to research supported by CRSC; scientific publications; and organizational documents. RESULTS/ANTICIPATED RESULTS: The case study will identify the CRSC model's impact on the research enterprise. Findings will articulate the specific strategies and practices the CRSC implemented to support clinical research; key factors, people, and resources that helped develop, improve, and promote CRSC services; significant milestones in evolution of the CRSC; and specific ways in which support services impact clinical research infrastructure and outcomes. The findings will highlight both strengths and areas for improvement. Early results show historical challenges with operational silos and resource limitations. Findings suggest CRSC facilitators include a team science approach with institutional support. DISCUSSION/SIGNIFICANCE OF IMPACT: This case study will provide insights related to benefits, challenges, and facilitators of a translational science support model. Insights will guide the CRSC's evolution and be broadly disseminated to promote knowledge sharing and best practices for future translational science applications.

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Improving social media advertising campaigns for participant recruitment for clinical trials and other health research studies

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OBJECTIVES/GOALS: This continuous quality improvement project focuses on the efficiency and effectiveness of social media campaigns for clinical trials and other health research. We analyzed data from 160 studies that recruited via social media campaigns on Meta and used the results to make improvements to MICHR's Participant Recruitment social media campaigns. METHODS/STUDY POPULATION: Data on 440 ad buys purchased for Meta

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