

to enable consistent measurement of translational science benefits, support longitudinal tracking, and strengthen cross-hub comparisons of real-world impact beyond research productivity. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The validated impact measures shared in this session advance translational science evaluation. Standardized items assessing translational science short- and long-term impacts are of interest to the CTSA community and any organization engaged in translational science capacity building.

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Assessing the research needs and opportunities of a university-based dissemination and implementation science network

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OBJECTIVES/GOALS: The CTSA at the University of Michigan, MICHHR, has conducted a sequential mixed-methods needs assessment of a network of over 250 dissemination and implementation scientists working at the university. The purpose of this evaluation is to identify the research training needs of this network and to inform efforts to improve the networks' productivity. **METHODS/STUDY POPULATION:** An IRB-approved sequential mixed-methods needs assessment of a network of over 250 dissemination and implementation scientists was conducted. First, surveys were sent to all members of the network using Qualtrics. This survey was designed to measure the challenges and facilitators encountered by members of this network, using response categories aligned with the Translational Science Benefits Model (Luke et al., 2018) to facilitate the identification of programmatic improvement goals. The survey also asked questions regarding network members' training preferences, and their current plans to design specific types of implementation science clinical trials (Fortney et al., 2024). Survey respondents also indicated their availability for subsequent interviews to explore their career and training paths. **RESULTS/ANTICIPATED RESULTS:** Surveys were sent out to over 250 individual members of the Implementation Science Network supported by MICHHR. This network includes 249 U-M employees representing 44 departments or units, 7 individuals from Veterans Affairs and 16 from other Institutions, and of these 32 individuals (11%). Despite this low response rate, the results clearly indicated that accessing D&I training/educational resources, or learning about relevant measures, metrics and testable strategies was a major barrier to 71% of network members, with 61% particularly interested in training on developing and testing strategies. Most respondents (54%) reported that having more financial resources was a facilitator of their work and 62% volunteered to be interviewed about their careers. Interviews are being conducted and analyzed. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The results of this evaluation suggest dissemination and implementation scientists need more formal training programs, specifically ones focused on the selection of implementation strategies for testing in pragmatic and hybrid clinical trials. This work provides a rigorous and reproducible methods for CTSAs to conduct needs assessments.

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Emergency physician decision-making regarding continuous sedative infusions: Preliminary report of a single-center survey study

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OBJECTIVES/GOALS: The emergency department (ED) is a critical locus of care for mechanically ventilated patients. Emergency physician (EP) perceptions and decision-making on sedation for these patients have not been studied. We seek to characterize EP decision-making on sedatives. **METHODS/STUDY POPULATION:** This is a preliminary report of a single-center survey study. We surveyed senior residents and attending EP scaring for patients enrolled in an ongoing prospective cohort study of ED sedation. Surveys were delivered electronically. Respondents were asked to provide demographics, impressions effectiveness of the sedative infusions they administered, occurrence of related adverse events (AE), and ranking of factors influencing their decision-making. Respondents were also asked if they considered using other sedative infusions (propofol [PRO], fentanyl [FENT], dexmedetomidine [DEX], ketamine [KET], and midazolam [MDZ]), and why they chose not to use them. The use of bolus-dose sedatives was not assessed. **RESULTS/ANTICIPATED RESULTS:** From October 2024 through September 2025, 174 surveys were sent and 127 completed (73%). PRO was most commonly used (94%), followed by FENT (51%) and DEX (14%). Effectiveness was highest for PRO (84% "somewhat" or "very" effective; FENT 75%, DEX 72%). The leading AE was hypotension (PRO 32%, DEX 17%). Effectiveness was the most important decision-making factor, familiarity the least. DEX, FENT, KET, and MDZ were considered but not used in about 25% of cases. Emerging themes from free-text comments included perception of under-sedation as an AE and influence of medication accessibility. **DISCUSSION/SIGNIFICANCE OF IMPACT:** EPs perceive PRO as effective but associated with frequent AE, usually hypotension. Perceived effectiveness drives sedative selection. Our findings will inform the design of interventions to optimize ED sedation.

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Research reproducibility and the language of gold standard science: A content analysis of Clinical and Translational Science Award (CTSA) abstracts

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OBJECTIVES/GOALS: Established in 2006, Clinical and Translational Science Awards (CTSA) support programs at research institutions that accelerate the "bench to bedside" timeline. This project explores how funded hubs describe their programs' contributions to scientific rigor and transparency. **METHODS/STUDY POPULATION:** Grant information associated with CTSA hub awards were extracted from NIH Reporter through their application programming interface (API). The primary author utilized text mining to analyze the corpus with a predetermined list of terms