

sources for palliative care are similar between immigrants and those born in the US. Education is important and is a strong predictor of perceived knowledge of palliative care. Women perceive they have lower levels of knowledge of PC than men. Differences in end of life care between immigrants and non-immigrants cannot be explained by knowledge differences. Further research is needed to examine the potential factors including suboptimal communication between providers and immigrant patients to understand why these differences are noted. Future strategies for improving knowledge of palliative care should target health care providers as the key trusted source of information to help address deficits noted in this study.

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A community-based, low calorie dietary intervention for the prevention and remission of type 2 diabetes mellitus

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OBJECTIVES/SPECIFIC AIMS: The aim is to investigate if sustained weight loss due to caloric restriction can be achieved in a community setting, using faith-based organisations (FBOs) as hubs; and if this weight loss can lead to the re-establishment of normal metabolism (using the normalisation of blood sugar levels while off glucose lowering medication as a proxy) in a person with pre-diabetes or T2DM. **METHODS/STUDY POPULATION:** Members of the FBO with either a diagnosis of T2DM for <6 years or pre-diabetes as defined by the American Diabetes Association (ADA); and a Body Mass index (BMI) of ≥ 27 kg/m² are eligible. After counselling, participants will be placed on a 12 week low calorie liquid diet, supplemented by low carbohydrate vegetables, totalling approximately 840 kcal/day. During this time, participants will be monitored weekly at their FBO by trained members of their congregation, with oversight from the study team, for change in weight, fasting blood glucose, waist and hip circumference and blood pressure. This will be followed by a 3 month period during which participants will receive ongoing dietary advice as they transfer to a balanced, reduced calorie, solid diet. Physical measurements will be monitored monthly during this 3 month period. The next 6 months is a period where the participants and the FBO health team move towards 'independence'. This involves further training of the FBO health team and participants in healthy lifestyle habits; and a commitment by the leadership of the FBO to assume 'ownership' for NCD monitoring within their community. Physical measurements will be repeated at the end of one year. **RESULTS/ANTICIPATED RESULTS:** Based on previous studies, we expect that participants who are compliant to the diet will lose approximately 2.2 kg per week over the 12 week period. This will be associated with rapid (within 1 week) normalisation of fasting blood glucose levels (<7mmol / L). We expect that, due to the accessibility of NCD monitoring and support, that participants to be satisfied with their care and compliant to their regime and that the results of the first 12 weeks will be sustained at the 12 month follow up. We expect that the FBO leadership will assume the responsibility of continuing and NCD programme, not only for the local congregation but for the surrounding community. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Diabetes remission with a low calorie diet is a viable intervention for T2DM remission however social support is key to an individual's success. This novel study which proposes institution of a diabetes remission intervention which fits into the participant's locale and involves peer support, should increase long-term success.

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A High-Impact, Structured, Collaborative Approach to Implementing and Utilizing the Research Performance Progress Report (RPPR) for a Clinical and Translational Science Award

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OBJECTIVES/SPECIFIC AIMS: This presentation will highlight a structured, collaborative approach to implementing and utilizing the RPPR process created at the University of Minnesota CTSI in response to the need to enhance the quality, efficiency, consistency, and utilization of annual program reporting. The approach is in line with the NCATS's strategic objective that encourages all CTS organizations to "disseminate research results and best practices broadly, and promote a culture of openness, sharing and transparency" (NCATS, 2016, p. 19). Program activities that support translational processes and contribute to clinical outcomes are complex, nonlinear, and multidisciplinary (Smith et al., 2017). In this complex context, the meaningful engagement and reflection of program staff and collaborators is essential for all aspects of program planning, implementation, reporting, and dissemination. The University of Minnesota CTSI's key objectives, goals, and uses of RPPR are as follows: - Develop, align, and leverage the RPPR to fulfill the accountability requirements, needs, and expectations of multiple stakeholders: NIH/NCATS, Internal Advisory Board and External Advisory Board, campus/hub, program staff and collaborators. - Engage the CTSA staff and collaborators as a team in multiple aspects of program reporting. - Inform strategic management, continuous improvement, monitoring and evaluation, organizational learning and dissemination to program stakeholders. - Translate the reported information into practical, evidence-based issues and strategic questions for the leadership discussions and advisory board consultations, actionable work plans, communication to stakeholders, organizational learning, and translational science knowledge base. **METHODS/STUDY POPULATION:** A case study of the programmatic/evaluative and methodological approach/technique development that resulted in a formal, structured, collaborative, transparent process with detailed guidelines, templates, and timelines. The process and content for reporting has been developed via a variety of methods and sources: specific funder (NIH) requirements, Huddle meetings, document/content/database analysis, reflection meetings with component staff, informal conversations, and observations. Preparation for the report began almost one year in advance, including careful analysis of the report requirements, developing user-friendly, detailed guidelines, templates, and examples. The guide templates and worksheets were created as a result of time spent navigating current instructions provided by NIH and NCATS. Timeline/project plan was developed with start and end dates for all of the moving parts along with identified responsible personnel for each of the tasks. A grid of the grant components and responsible personnel was designed to highlight the matrixed organization of the grant and the need to work across components to create single reports. The RPPR key categories have also been considered for incorporating and tracking in a program activity/customer tracking system for ongoing data management and use. As a complex translational science program, UMN CTSI has multiple initiatives, variables, and metrics to report. The program staff has been deeply engaged in the evaluative reflection to identify, prioritize, and incorporate into the RPPR the metrics that most useful to manage and

describe CTSI processes, participation, products, and outcomes. Program components responded differently to the collaborative approach implemented. The M&E technical assistance was implemented in 3 different ways: components either did the M&E RPPR template themselves, with minimal M&E team assistance; responded to comments and information provided by the M&E team as a first step; or requested a significant level of assistance from M&E. Participants/partners in developing and using RPPR include CTSI program leadership and staff, administration, communication staff, M&E team, and our collaborators. RESULTS/ANTICIPATED RESULTS: The proposed comprehensive approach to the annual program performance reporting shows sound promise to enhance program staff engagement, report utilization, learning, strategic management, self-evaluation capacity, and continuous improvement within a clinical and translational science organization. DISCUSSION/SIGNIFICANCE OF IMPACT: This structured approach's impact is significant in that it fills the current gap in the practice, literature, and methodology and offers a practical example of a "practice that works" for CTR (and other) organizations and programs striving to improve their reporting practices, staff engagement, learning, and program impact. Leveraging and synergizing the RPPR requirements and other complex, data-demanding obligations and needs can help the CTS programs move beyond the once-a-year compilation of project accomplishments and challenges to developing and sharing a thoughtful translational science program success story. References: National Center for Advancing Translational Sciences. (2016). NCATS Strategic Plan. NIH. Available at: <https://ncats.nih.gov/strategicplan> Smith, C., Baveja, R., Grieb, T., & Mashour, G. (2017). Toward a science of translational science. *Journal of Clinical and Translational Science*, 1(4), 253-255. doi:10.1017/cts.2017.14

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Adopting a learning health system architecture: a scoping review and pre-implementation framework to reduce readmissions within academic hospitals

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OBJECTIVES/SPECIFIC AIMS: Of the six Centers for Medicare and Medicaid Services (CMS) monitored diagnoses targeted for readmissions reductions, reasons for readmissions within academic hospitals are poorly understood and reflect complex interactions between the patient, provider and organizational-level responses to initial hospitalization. Learning health systems (the organizational and orchestrated integration of research into evidence-based practice) can address the complexities of readmissions through an innovative approach to knowledge translation and patient-centered outcomes research. The objective of this review is to define and optimize the architecture of learning health systems to produce a dynamic pre-implementation framework of knowledge translation and patient-centered outcomes research, leveraging two engines (research and learning) within the academic and clinical settings for reducing readmissions. METHODS/STUDY POPULATION: Three databases were utilized for this scoping review (PubMed, Academic Search Premier, and Scopus) focusing on 1.) learning health systems and the methods of defining and building these systems within an academic hospital setting and 2.) the use of learning health systems in reducing readmissions within academic hospitals. Empirical articles and reviews pertaining to the architecture, development, conceptualization, definition, and translation of learning

health systems were identified and compiled into a scoping review and proposed framework. RESULTS/ANTICIPATED RESULTS: The scoping review yielded 139 articles; from which 28 articles were retained. No articles were found utilizing learning health systems to address readmissions. Thus, a new architectural framework was developed incorporating common architectural themes from the literature with adaptations to fit the interests of patients, providers, and researchers in reducing readmissions within academic hospitals (Figure 1). DISCUSSION/SIGNIFICANCE OF IMPACT: Given the dearth of information applying learning health systems to readmissions, the proposed architecture for an integrative learning health system can be utilized as a dynamic foundation for adoption and pre-implementation planning for reducing readmissions within academic hospital settings. Additionally, the authors expect this model to be tested and continually refined to address historical and emerging issues for clinically-relevant and clinically-effective approaches to patient-centered practice and research.

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Association between dopaminergic genetic variants, COMTrs4680 and DRD2rs1076560, and alcohol consumption and reward behaviors in non-dependent drinkers

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OBJECTIVES/SPECIFIC AIMS: The objective of this exploratory study is to evaluate the relationship between the individual genetic variants in COMTrs4680 and DRD2rs1076560 and relevant alcohol use behaviors (i.e. alcohol consumption and reward processing behaviors) in non-dependent drinkers within experimentally controlled IV-ASA CAIS sessions. The overall goal of this study is to begin gathering data on the influence of individual genetic variants on alcohol consumption and other drinking-related behaviors. This will aid in the creation of a polygenic model of risk for AUD which will provide more insight into how the mesolimbic pathway is affected by alcohol use. METHODS/STUDY POPULATION: Study population: The sample included male and female non-dependent drinkers (N=149). Genotypes for functional polymorphisms in COMT (rs4680) and DRD2 (rs1076560) genes were determined for all subjects from blood samples obtained during screening. Alcohol consumption was assessed using the 90-day Timeline Followback Interviews (TLFB). Study population demographics: Self-reported gender (53.5% identified as male); Self-reported race (61.2% identified as white); Age ranged from 21-46 years old, with 22 years being the mode. Experiment: Free access (open-bar) intravenous alcohol self-administration (IV-ASA) using the computer-assisted alcohol infusion system (CAIS) paradigm; Subjects had the choice of pressing a button ad libitum for IV alcohol infusions during the session, neurobehavioral questionnaires were collected throughout the 2.5-hr alcohol infusion session. Primary outcome measures included: Total Rewards, Peak breath alcohol concentration (BrAC) achieved, and Total Ethanol consumed. Statistical Analyses: Conducted using SPSS IBM Statistics Versions 1.0.0-2482; non-dependent drinkers were organized into two groups based on their genotypes, minor allele carriers and major allele homozygotes. Outcome measures were compared between genotype groups using analysis of variance or non-parametric Mann-Whitney U-test as appropriate. RESULTS/ANTICIPATED RESULTS: -We expect the genetic makeup of the