incorporated the CP approach. Teams were able to streamline and simplify Logic/CP models. DISCUSSION/SIGNIFICANCE OF IMPACT: Through capacity-building and mentored exercises, an innovation team was able to infuse CP thinking into the evaluation of their ongoing program. The CP approach to design and evaluation maps progress and indicators across the life of a program from initial activities to its ultimate impact.

Lessons learned from implementing Quality Improvement (QI) in academic clinical research setting

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OBJECTIVES/GOALS: We describe here the implementation of a pilot Quality Improvement (QI) program in clinical research processes in order to facilitate translation from bench to community. This presentation will also discuss challenges encountered by the research teams during the implementation of QI activities. METHODS/STUDY POPULATION: Miami CTSI collaborated with University of Kansas' CTSA to test the implementation of a QI program for clinical research processes. The program has a duration of 1 year and consists of multi-modal training and coaching sessions with different research teams. Six teams comprising of Principal investigators, clinical coordinators, and regulatory specialists participated in the program based in applied clinical microsystem theory science. Team coaches and teams worked together to assess current processes, test new and improved processes, and standardize and disseminate applicable best practices of the QI program. RESULTS/ANTICIPATED RESULTS: The implementation of QI activities in large clinical research settings poses numerous challenges for the research team. We will present survey results from the coaching sessions and follow on feedback from the different teams involved in the program to implement the QI activities. We will describe the modifications and adjustments made to the original conceptual framework of QI program in order for it to be applicable and feasible for the settings of the University of Miami. We will provide recommendations for other academic clinical research centers that are considering implementing a QI program. DISCUSSION/SIGNIFICANCE OF IMPACT: The successful adaptation of a QI process to implement in academic clinical research settings relies on early engagement of the institution leadership, careful selection of team members, as well as developing communication skills to enhance team dynamics as a clinical research unit.

Report from the research trenches: A mixed-methods approach to investigation of how recruitment methods, culture and collaboration impact clinical trial accrual

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OBJECTIVES/GOALS: The research project aimed to understand the perceived effectiveness of research recruitment methods, including informatics tool utilization, so that best practices can be established and outcomes measured longitudinally. METHODS/STUDY POPULATION: The mixed-methods study was conducted by the Oregon Clinical and Translational Science Institute, the CTSA at Oregon Health and Sciences University. A survey, clinical trial accrual data, and interviews were used to assess the study aims. The survey asked about utilization and value of specific recruitment tools and methods. Accrual data was obtained from the clinical trial management system and analyzed using parameters from the CTSA "Accrual Metric". The metric was calculated for clinical trials enrolling during 2017. Interviews were conducted with researchers identified by the survey and over or under-enrolled accrual data, and inquired about recruitment facilitators and barriers. RESULTS/ANTICIPATED RESULTS: The most frequently mentioned facilitator of recruitment was direct patient contact, either in the healthcare setting (58.4% of survey respondents) or through patient outreach (32%). A lack of resources was considered a key barrier (21% of survey respondents) and a stated need (27%). Interview data expanded on these findings, as 23% of interviewees indicated a collaborative culture, which includes clinic integration, was key to recruitment success. Additionally, 20% of interviewees identified resources (i.e. funding, staff, time) as their greatest need. Notably, 13% of studies with an accrual ratio of "0" had frequent staff turnover. DISCUSSION/SIGNIFICANCE OF IMPACT: This approach allowed for a uniquely targeted analysis of accrual facilitators and barriers. Use of the CTSA accrual metric identified high-value interview respondents and will allow for investigation into additional accrual questions, such as the impact of funding sources and departmental factors.

Results of a Formative Evaluation of the Cardiopulmonary Vascular Biology (CPVB) Center of Biomedical Research Excellence (COBRE)

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OBJECTIVES/GOALS: Results of a formative evaluation of the CardioPulmonary Vascular Biology (CPVB) COBRE will be presented. Of interest were the quality of the overall program, satisfaction with training, mentoring, and services offered, mechanisms for communication, and effectiveness of the collaboration between junior investigators and their mentors. METHODS/STUDY POPULATION: Integral to this evaluation was the creation of questionnaire for junior investigators to complete that addressed four domains: 1) relationship with their mentor, 2) research self-efficacy, 3) administrative and specialty cores value, and 4) satisfaction with events and operations of the COBRE. The two co-principal investigators, program manager, and evaluator developed the 34 items comprising this instrument. The questionnaire was administered online and all eight of the current junior investigators completed the questionnaire. RESULTS/ANTICIPATED RESULTS: Participants were mostly satisfied with the mentoring they were receiving and the operational services of the Administrative and Lab Cores. In terms of training preparedness, these participants felt they were not as prepared as they would like for making adequate progress as an academician and did not feel prepared for managing a lab. Interestingly, these participants felt they were most prepared to develop collaborations with scholars and professionals from other disciplines, but stated they felt they were not as prepared in their abilities to build scientific collaborations. DISCUSSION/SIGNIFICANCE OF IMPACT: Because a primary foci of COBRE grant mechanisms is the development of junior level investigators, evaluating their skills, mentoring experiences, and the usefulness of services is

paramount to the sustainability and collaborative research environments of COBREs. This evaluation serves as a model for other COBREs as a tool for measuring this goal.

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The University of North Carolina CTSA Hub (NC TraCS) Service Evaluation: Using Customer Feedback to Improve Services

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OBJECTIVES/GOALS: The North Carolina Translational and Clinical Sciences Institute (NC TraCS) supports faculty and staff in carrying out clinical and translational research at UNC-Chapel Hill. To better understand customer satisfaction and impact, a survey was administered among NC TraCS users. METHODS/STUDY POPULATION: NC TraCS has 13 program areas that range from Biostatistics to Community and Stakeholder Engagement. These programs provide services to faculty, staff, students, and outside researchers in the area of clinical and translational science. A customer feedback survey was administered in Spring 2019 to anyone who had used at least one NC TraCS service between March 1st, 2017 and February 28th, 2019. A total of 856 survey invitations were sent. The survey included questions around users' perception of the ease of access, helpfulness, outcome, and promptness of the services received using 6-point Likert scale. The survey also addressed career impact, communications, and suggestions for improvement. RESULTS/ANTICIPATED RESULTS: We received 268 responses, (31% response). Majority of respondents were satisfied with Overall Helpfulness (95%), Outcome of Service (96%), Ease of Access (93%), and Promptness of Service (90%). They also noted that their careers had at least slightly improved in the following areas: Mentorship (76%), Research Methods (75%), Skill Development (77%), Research Direction (71%) and Collaboration (80%). Furthermore, 96% responded positively to returning to TraCS. The feedback received was shared with service administrators and NC TraCS leadership to identify areas of improvement and further strengthen their services. Concerns, when present, were addressed by service directors or the overall PI's. DISCUSSION/SIGNIFICANCE OF IMPACT: Need to communicate expectations to customers the expected turn-around time for help emerged as a clear take-away. In response, TraCS leadership is working to improve staffing and workflows for efficient service delivery including expectation management, especially among the most popular services.

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Using Exit Interviews as One Component of the KL2 Program Impact Analysis Method

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OBJECTIVES/GOALS: The Penn State KL2 Career Development Program provides a comprehensive structured training and mentorship to junior faculty scientists (KL2 scholars). The goal of this study is to describe the perceptions of scholars after completion of the training and determine self-perceived impact of the program using exit interviews as a unique method. METHODS/STUDY POPULATION: Ten KL2 scholars (5 from each cohort of 2014 and 2017) participated in the evaluation. We used a descriptive qualitative design supplemented with quantitative data, to conduct an individual in-depth exit interview with each scholar to understand their perceptions on the impact of the KL2 program. Data were collected using a semi-structured interview guide developed by the program directors including scholars and a Likert scale survey. Thematic analysis of the data involved: reading and re-reading transcripts, identifying and categorizing keywords and phrases and developing overall themes that explained the processes within categories. In establishing rigor, two authors carefully coded, categorized and identified patterns and emerged themes which were also reviewed and confirmed by the other authors. RESULTS/ANTICIPATED RESULTS: Two sets of themes emerged. The main themes that described positive aspects of the KL2 program by scholars included: *Interdisciplinary Collaboration, Mentoring, and Protected Time for Independent Research*. Scholars also identified some contrary themes that included: *Limited Access to Expenditures, Changes in Individual Mentorship Needs and Areas for Improvement*. On a Likert scale (1- not at all, 10-extremely likely), scholars reported high positive influence of the KL2 program on their scope of research (8.7±0.52) and future career (8.5±0.70). They also found mentorship experience with primary mentor (9.6±0.22) and team (8.5±0.54) as well as peer collaboration (8.5±0.67) opportunities highly beneficial to their career and professional development. DISCUSSION/SIGNIFICANCE OF IMPACT: The qualitative study strengthens the reliability of data and scholar recommendations collected via other evaluation measures. Findings broaden understanding of the processes through which program outcomes are achieved effectively and where modifications are needed. An updated program for cohort 3 was guided by cohort 1 and 2 interview responses.

Health Equity & Community Engagement

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Assessing Quality of Life, Depression, and Symptomatology in Puerto Rican Hispanic Patients Hospitalized with Heart Failure

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OBJECTIVES/GOALS: Heart failure is a public health problem. Currently, heart failure affects 2-5 % of adults within the age of 65-75 years. (Mosterd & Hoes, 2007)Moreover, rates of hospitalization and rehospitalization among patients with heart failure are high and are associated with poor quality of life(Dunlay et al., 2011)Unsurprisingly, studies have found that poor quality of life is linked to decreased physical activity and increased symptomatology, a perception that can quickly change depending on the patient's mood. Factors such as age, cultural background, socioeconomical status, ethnicity, and gender are highly correlated with quality of life but have not been studied thoroughly. Quality of life assessment in Puerto Rican Hispanics living with heart failure is non-existent. Objective:•To determine gender-specific differences in quality of life for patients hospitalized due to heart failure in Puerto Rico.•To correlate heart failure symptoms, presence of depression and level of perceived quality of life in Puerto Rican patients hospitalized due to heart failure METHODS/STUDY POPULATION: