

goals are to enhance the availability and communication among CTSI resources, for example internal funding, and to expand existing mentorship. **METHODS/STUDY POPULATION:** Developed a reviewer database that serves to streamline reviewer identification, decrease reviewer fatigue, and promote collaboration among disciplines. We started with a pool of NIH-funded investigators from across the Indiana CTSI core institutions and merged this list with previous CTSI reviewers and internal funding awardees. To expand this list, names and expertise from new faculty hires were added. **RESULTS/ANTICIPATED RESULTS:** Though this tool is relatively new, we have already observed an increase in junior faculty awareness and engagement with the CTSI. This database allows for increased opportunities of junior faculty to serve as reviewers and to refine grant writing skills and provides a platform for networking and collaborating across disciplines. It also allows for increased integration of programs with a shared reviewer database and promotes grant review standardization. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Our database utilization seeks to decrease the time for junior faculty to obtain their first extramural grant, to enhance promotion and tenure packages, strengthen integration among CTSI programs, increase interactions between clinical and basic science investigators, and promote team science.

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### Utilizing digital pedagogy to build communication skills in predoctoral training programs

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**OBJECTIVES/SPECIFIC AIMS:** A key factor for success in science is the ability to communicate clearly and succinctly using language appropriate to the audience. Most predoctoral training programs offer opportunities for students to build oral and written communication skills at local and national conferences. However, this rarely provides specific feedback and tends to be episodic. The Mayo Clinic Center for Clinical and Translational Science (CCaTS) has developed an environment for deliberate practice of presentation skills within a weekly Works in Progress and Journal Club session using a learning management system, Blackboard Collaborate. The learning management system captures the presentation that can then be viewed by the student. Watching yourself give a presentation is a powerful learning tool. The learning objectives of the sessions provide students deliberate practice to: (1) Build critical presentation skills for a 1-minute elevator talk, a 2-minute poster overview, a 10-minute oral presentation of your science to a science audience and to a non-science audience. (2) Develop constructive reviewer skills by completing peer reviews of presentations. (3) Develop critical thinking skills to ask thought provoking questions during presentations. By utilizing a curriculum that offers video-recording for reflection and self-evaluation, Mayo Clinic CCaTS has developed an environment in which predoctoral students are encouraged and supported to constantly hone their presentation skills. **METHODS/STUDY POPULATION:** All CCaTS predoctoral students are asked to prepare presentations in several formats for the weekly 1-hour session. The students' presentations of their science or journal articles are recorded and saved within Blackboard; a link is provided for the student to review personally, with a mentor, and with the Education Coordinator to discuss the strengths and weaknesses of the presentation. During each session, faculty facilitators encourage students to ask thought provoking questions, and student reviewers are assigned to provide critical and constructive written feedback to the presenter. Sessions providing tools and guidelines for constructive feedback and developing critical and constructive questions are regularly interspersed. **RESULTS/ANTICIPATED RESULTS:** By reviewing a video recording of their presentations, CCaTS predoctoral students get the opportunity to self-evaluate their performance as an audience member. By going through this process of preparing, presenting, reflecting on their presentations, and discussing their strengths and weaknesses with mentors and classmates, the students gain both powerful presentation skills and methods to improve their delivery and reviewer skills. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Successful scientists, whether in academia or industry, have the ability to communicate their science clearly using appropriate and common language specific to each audience they present to. By utilizing a curriculum that offers video-recording for reflection and self-evaluation, Mayo Clinic CCaTS has developed an environment in which predoctoral students are encouraged and supported to constantly hone their presentation skills.

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### The extra-territorial translational team: Advances in multi-faceted community engagement

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**OBJECTIVES:** We developed the concept of the *extra-territorial translational team (ETTT)* in 2014 as a more inclusive revision and extension of the *team*

science concept. Translational thinking is largely marked by the perception of the team as a thing-like structure at the center of the scientific activity. Collaboration accordingly involves bringing external others (e.g., scientists, community members, and clinicians) into the team through limited or dependent participation. The ETTT is intended to frame the team as an *idea*: a schema for assembling and managing *relationships* among otherwise disparate individuals with vested interests in the problem at hand. Thus, the ETTT can be seen as a *process* as well as an *object*. Our initial focus was on the very successful *SCI Café* program (where Science and Communities Interact) conducted through the Institute for Translational Sciences and the Center for Translational Sciences Award at UTMB. We found that by looking beyond the taken-for-granted features of translational research teams, we are free to discover new ways of organizing research and community engagement that are innovative yet productive. The major area of growth, however, has been the Research, Education, And Community Health Coalition (REACH). The purpose of the current study is to outline strategies for inventorying and evaluating the emerging programs that are the major components of REACH and the *SCI Café* and to suggest implications for the extra-territorial translational team concept. **METHODS/STUDY POPULATION:** The assessment of the extraterritorial team concept in REACH and *SCI Café* is primary a process of qualitative content analysis. We use semi-structured interviews with project leadership, observations of the actual performance of the REACH teams, and the review of REACH and *SCI Café* documents, for example, Quantitatively, we have conducted a Community Health Needs Assessment (CHNA) to better understand community health and resource needs. **RESULTS:** Both the *SCI Café* program and the REACH initiative follow the principles of the ETTT concept for assembling and managing research and community outreach. The following are several key principles shared by both programs: (1) The importance of creative, applicable, and inclusive mission statements: (a) REACH seeks to facilitate communication, collaborative research, and service efforts between UTMB and Institute for Translational Sciences investigators and Galveston County community leaders; (b) The *SCI Café* hosts interactive dialogs that serve as a medium for priming, organizing, communicating and strategizing among the individuals involved in team science via community-based research projects. (2) Increasing scientific and health literacy: (a) REACH seeks to increase literacy through both short-term and long-term interactions; (b) The *SCI Café* focuses on short-term yet intensive interaction through conversations among researchers, clinicians, and the public. (3) Sharing timely scientific public health information with the community: (a) REACH seeks information from community leaders on relevant topics; (b) The *SCI Café* can mobilize quickly to respond to timely topics by direct communication with a wide range of stakeholders, academic as well as community based. (4) Sharing leadership with the community: (a) REACH establishes formal relationships with 23 UTMB units and 39 broad-based, high impact Galveston County organizations. (b) The *SCI Café* works primarily with "grass roots" community-level groups and organizations. (5) Creating resources and strategies for expansion: (a) REACH is working to expand its activities to other counties in the Gulf Coast area of Texas (e.g., Brazoria and Matagorda Counties); (b) The *SCI Café* is expanding its program to comfortable locations accessible to local residents (e.g., schools and libraries). (6) The value of regular and systematic scientific and evaluation: (a) REACH is conducting a Community Health Needs Assessment (CHNA) that has already discovered major issues of relevance to community leaders including mental health, vaccination rates, food security, disaster preparedness, and caregiving. (b) The *SCI Café* conducts an evaluation survey at the conclusion of every event to stay current with participants interests and needs. **DISCUSSION/SIGNIFICANCE OF IMPACT:** (1) In order to maintain the ability to operate extra-territorially (i.e., beyond the safe organizational confines of the University), the 2 programs discussed here must maintain a fluid team structure. Different projects require different types of leadership, grass roots participation, university resources, communications/public relations, etc. (2) The strategy of accumulating and disseminating best practices appears to be one of the most valuable products of the extra-territorial team. (a) REACH's "Offer and Ask" practice by which information of university and community resources (skills and expertise) are shared makes cooperation and shared leadership explicit. (b) The *SCI Café*'s interactional strategies for encouraging and enabling café participants to join the discussion/conversation are wonderful ways to convert an otherwise unidirectional lecture into a vibrant conversation. (3) Although the scope of these 2 programs is quite different, the message from both is that the principles of extra-territorial translational teams are application to all such endeavors to improve scientific and health literacy.

### HEALTH EQUITY & COMMUNITY ENGAGEMENT

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#### A community-academic partnership to understand the correlates of successful aging in place (year 2)

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**OBJECTIVES/SPECIFIC AIMS:** Objective: The Rockefeller University Center for Clinical and Translational Science (RU-CCTS), Clinical Directors Network (CDN), and Carter Burden Network (CBN), a multisite senior services organization serving East Harlem, NY, formed a community-academic partnership to examine the use of a simple validated surrogate measure of overall health status and frailty in this population. Many CBN seniors are racial/ethnic minorities, low-income, and suffer from multiple chronic conditions, depression and food insecurity. Multiple biological, musculoskeletal, psychosocial and nutritional factors contribute to frailty, which has been defined variously in senior health outcomes research. The CTSA-funded Pilot Project aims to: (1) Engage CBN seniors and stakeholders in priority-setting, joint protocol development, research conduct, analysis, and dissemination; (2) Characterize the health status of the CBN seniors using validated measures; (3) Establish database infrastructure for current and future research; (4) Understand how health and senior activities information can be used to create programs to improve senior health. **METHODS/STUDY POPULATION:** Methods: (1) CEnR-Navigation, a collaborative program/process that consists of semistructured meetings and activities facilitated by expert Navigators, was used for partnership development and to engage Carter Burden seniors to refine priorities and research questions, provide feedback on study design and conduct, and analyze and disseminate results. (2) Standard physical measurements and validated survey instruments were used to collect health information; target enrollment is 240 seniors across 2 sites (1 hosted within a subsidized housing facility and Social Model Adult Day Program). (3) A REDCap-based platform was designed for data capture and import. Individual attendance at senior activities for the prior year was extracted from existing records. The primary outcome is frailty, as measured by validated walk/balance tests (Short Physical Performance Battery). Secondary outcomes include measures of engagement, and association of use of services/activities with the primary outcome. **RESULTS/ANTICIPATED RESULTS:** (1) In total, 29 residents and 14 other stakeholders engaged in partnership-building, study design and implementation. (2) From May to November 2017, 98 participants were enrolled from site 1 (a residential site). Enrollment at site 2 (a senior center), begun in November, is projected for February completion. Characteristics of site 1 participants: median age = 63.6 years; Hispanic, 44.90% (44); White, 13.89% (10), Black, 62.50% (45); Asian, 4.17% (3); American Indian or Alaskan Native, 2.78% (2), and Other, 16.67% (12). Educational attainment: 51.04% (49) had not completed high school; 19.79% (19) were high school graduates; 18.75% (18) completed some college, and 10.42% (10) were college graduates. For the 85 participants reporting annual income: 64.71% (55) reported < \$10,000; 28.24% (24) reported \$10,000–\$15,000; 7.06% (6) were among the ranges from \$15,000 to \$50,000. The average body mass index (BMI) was 30, which is obese. For 83.67% (82) of site 1 participants, the BMI was in the range of overweight or obese. Half of participants (49) reported health literacy barriers in the Single Item Health Literacy Survey. Demographics and Frailty assessments (walk and balance tests) for participants enrolled at both sites will be reported. (3) Activity participation data for July 2016–November 2017 were recovered for 507 sessions at site 1 and are being analyzed. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Here we report progress in developing a sustainable community-academic partnership, infrastructure and research capacity with the CBN senior services organization, and characterizing this at-risk population, of whom 71% have a high school education or less, 93% live in extreme poverty, and 84% are overweight or obese. A simple validated frailty measure in seniors will enable the acceleration of community-based translational research addressing senior health, and examine changes in this measure in relationship to the utilization of senior services.

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**OBJECTIVES/SPECIFIC AIMS:** Clostridium difficile infection (CDI) is the most common cause of antibiotic-associated diarrhea and an increasingly common infection in children in both hospital and community settings. Between 20% and 30% of pediatric patients will have a recurrence of symptoms in the days to weeks following an initial infection. Multiple recurrences have been successfully treated with fecal microbiota transplantation (FMT), though the body of evidence in pediatric patients is limited primarily to case reports and case series. The goal of our study was to better understand practices, success, and safety of FMT in children as well as identify risk factors associated with a failed FMT in our pediatric patients. **METHODS/STUDY POPULATION:** This multicenter retrospective analysis included 373 patients who underwent FMT for CDI between January 1, 2006 and January 1, 2017 from 18 pediatric centers. Demographics, baseline characteristics, FMT practices, C. difficile outcomes, and post-FMT complications were collected through chart abstraction. Successful FMT was defined as no recurrence of CDI within 60 days after FMT. Of the 373 patients in the cohort, 342 had known outcome data at two months post-FMT and were included in the primary analysis evaluating risk factors for recurrence post-FMT. An additional six patients who underwent FMT for refractory CDI were excluded from the primary analysis. Unadjusted analysis was performed using Wilcoxon rank-sum test, Pearson  $\chi^2$  test, or Fisher exact test where appropriate. Stepwise logistic regression was utilized to determine independent predictors of success. **RESULTS/ANTICIPATED RESULTS:** The median age of included patients was 10 years (IQR: 3.0, 15.0) and 50% of patients were female. The majority of the cohort was White (89.0%). Comorbidities included 120 patients with inflammatory bowel disease (IBD) and 14 patients who had undergone a solid organ or stem cell transplantation. Of the 336 patients with known outcomes at two months, 272 (81%) had a successful outcome. In the 64 (19%) patients that did have a recurrence, 35 underwent repeat FMT which was successful in 20 of the 35 (57%). The overall success rate of FMT in preventing further episodes of CDI in the cohort with known outcome data was 87%. Unadjusted predictors of a primary FMT response are summarized. Based on stepwise logistic regression modeling, the use of fresh stool, FMT delivery via colonoscopy, the lack of a feeding tube, and a lower number of CDI episodes before undergoing FMT were independently associated with a successful outcome. There were 20 adverse events in the cohort assessed to be related to FMT, 6 of which were felt to be severe. There were no deaths assessed to be related to FMT in the cohort. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The overall success of FMT in pediatric patients with recurrent or severe CDI is 81% after a single FMT. Children without a feeding tube, who receive an early FMT, FMT with fresh stool, or FMT via colonoscopy are less likely to have a recurrence of CDI in the 2 months following FMT. This is the first large study of FMT for CDI in a pediatric cohort. These findings, if confirmed by additional prospective studies, will support alterations in the practice of FMT in children.

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### A multicenter study of fecal microbiota transplantation for Clostridium difficile infection in children

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### Barriers to healthcare after the Affordable Care Act: A qualitative study of Los Angeles safety net patients' experiences with insurance and healthcare

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**OBJECTIVES/SPECIFIC AIMS:** N/A. **METHODS/STUDY POPULATION:** Over a million people gained insurance in Los Angeles (LA) County under the Affordable Care Act (ACA). The vast majority gained Medicaid—government sponsored insurance with low-cost sharing. LA County also made significant investments in the safety net including a program called MyHealthLA, which provides primary and tertiary care for the residually uninsured including poor undocumented individuals at specific sites. Despite this insurance expansion,