OBJECTIVES/SPECIFIC AIMS: Objective: The Rockefeller University Center for Clinical and Translational Sciences (CCTS) and the Center for Dissemination and Implementation Research incknowledgment (CDIN), and Carter Burden Network (CBN), a multisite senior services organization serving East Harlem, NY, formed a community-academic partner-
ship 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 Program 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-Navi-
tigation, 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); Other, 16.67% (12). Educational attainment: a majority of 51.04% (49) had not completed high school; 19.79% (19) were high school graduates; 18.75% (18) had 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, and 41% reported difficulty with frailty (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.

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


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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, clinical 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 χ² test, or Fisher exact test where appropriate. Stepwise logistic regression modeling 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% more FMTs 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 rate 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.