approval process, and limitations to carryover funding. However, pilot grants administered through the program strengthen the capacity to develop larger scale community-based research initiatives.

3009

Understanding the Lived Experience of Deaf Dominicans: Implementing Qualitative Methods with the Deaf Community in the Dominican Republic

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OBJECTIVES/SPECIFIC AIMS: Qualitative approaches help explore poorly understood phenomenon, and are highly engaging, enabling both sides of an encounter greater connection. Historically, Deaf communities have been marginalized and oppressed, with their linguistic needs unrecognized and ignored. As a result, Deaf participants are rarely involved in clinical research. Like other marginalized communities, the Deaf community experiences health disparity compared with others, especially in low- and middle-income settings. The purpose of this project was to assess the feasibility of conducting qualitative research with Deaf Dominicans. METHODS/STUDY POPULATION: We implemented a partnered research process with 59 Deaf community members in the Dominican Republic, conducting preliminary thematic analysis through reviews of interviews and on-site debriefings. RESULTS/ANTICIPATED RESULTS: Participants were highly engaged with the Deaf-Deaf research encounters, indicating satisfaction with both the process and with the opportunity to communicate their needs and interests. Preliminary findings indicated Deaf Dominicans were highly engaged, confirming their interest, and often stated that they felt they were being listened for the first time. Indeed, some participants claimed that this was the first time they communicated their experiences as Deaf Dominicans and appreciated the opportunity to relate this experience to Deaf interviewers. DISCUSSION/SIGNIFICANCE OF IMPACT: This experience confirms that the Deaf Dominican community can be mobilized and will participate in Deaf-Deaf research.

3560

Using Research Performance Progress Report data to Explore CTSI-Stakeholder Engagement through Network Analysis

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OBJECTIVES/SPECIFIC AIMS: To develop a social network model of collaborations within and external to the University of Rochester Medical Center (URMC) CTSI using data from the annual Research Performance Progress Report (RPPR) as well as other sources, to provide longitudinal evaluation of the CTSI's engagement with key stakeholder groups. METHODS/STUDY POPULATION: The annually submitted RPPR follows a specific format with well-defined sections. The Highlights, Milestones and Challenges Report includes areas in which CTSI function leaders provide details about program integration and innovation, including collaborations with other functions or external groups. The Highlights, Milestones and Challenges Report was qualitatively coded to identify function-collaborator dyads. Each entity in the dyad became a node in the network. Nodes were connected by edges named by the dyads. The network included two types of nodes. The first were CTSI internal functions/programs, i.e. the entities that submitted RPPR sections and formed an interconnected sub-network. The second type of nodes were entities external to the CTSI (collaborators, internal or external to the CTSI site). These entities were named by functions submitting RPPR narratives. External nodes with similar meanings were consolidated. Duplicate edges were removed. CTSI-external nodes were grouped into five stakeholder categories: URMC, University of Rochester (UR), community, other CTSA institutions, CTSA consortium. Thus, these nodes were connected to the CTSI internal nodes, but not to each other. A second source of collaboration data was function-reported internal metrics. As part of the internal metric data collection, functions list partners who play a role in improving metric data or who are responsible for providing data. Partners identified in the internal metrics data, but not specified in the RPPR, were added to the network. RESULTS/ANTICIPATED RESULTS: Twenty-three internal CTSI functions submitted an RPPR and represent the CTSI internal nodes. Internal CTSI functions identified 235 collaborations (edges): 125 collaborations with other CTSI internal functions, 57 collaborations with URMC entities, 14 with UR entities, 15 with the external community, 15 with other institutions (CTSA hubs and other universities), and 9 with CTSA consortium entities. Thirty-eight of the collaborations were identified in the internal metrics partners section. In total, the network comprised 104 nodes. Graph density was.022 for full network and.21 for the CTSI internal sub-network. The global clustering coefficient, a measure of connectivity, for the CTSI internal sub-network was.252. DISCUSSION/SIGNIFICANCE OF IMPACT: The RPPR provides an underutilized source of data for annually repeated analyses of internal and external CTSI collaborations and is a way to enhance use of this routinely collected information. Analyses of the network yield metrics for measuring CTSI reach and impact on stakeholder groups over time. For example, measures such as number of nodes representing entities external to CTSI and average vertex degree of the CTSI Internal nodes track aspects of CTSI collaborations. Visualizations using different layouts or highlighting different sub-networks provide a representation of CTSI engagement with the communities of stakeholders as well as insights to relationships between functions, regions of collaboration, and areas of gaps. These data also provide an important new mechanism to engage the CTSI leadership and function leads in understanding how their work contributes to the overall network and synergies they have with each other.

3029

Willingness to Engage in a Statewide Virtual Community for Biomedical Research

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OBJECTIVES/SPECIFIC AIMS: Virtual communities are an untested method to enhance community engagement in biomedical research. Our CTSA Hubs collaborated to assess receptivity to

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engage in a statewide Facebook (FB) group. METHODS/STUDY POPULATION: Cross-sectional online survey administered via iPads at the MN State Fair in 2018 to adults aged 18+ years residing in MN assessed demographics, social media use, interest in participating in a FB group for biomedical research; and open-ended questions on health topics of interest, and what would keep people engaged in this group. RESULTS/ANTICIPATED RESULTS: Respondents (N=487) were 21% racial minorities and 65% female sex. Most (87%, n=422) had created a personal FB profile. Of these, the proportion who agreed/strongly agreed was: 57% that the FB group sounded interesting, 45% were interested in being part of it, 41% were willing to share it with others, 62% that it would allow the community's thoughts/ideas to be heard and 59% wanted to learn about opportunities to participate in research on health topics they care about. Using content analysis, the top 3 health topics people wanted to learn about were chronic disease and prevention, wellness, and mental health. Top ways to keep people engaged were providing personable, relevant health information; and interactive bi-directional discussions. DISCUSSION/SIGNIFICANCE OF IMPACT: Findings will inform development of a FB group to engage diverse populations in biomedical research.

Mechanistic Basic to Clinical

3173

A Mouse Model to Study Image-Guided, Radiation-Induced Cardiac Injury and Potential Clinically Targetable Biologic Mediators

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OBJECTIVES/SPECIFIC AIMS: The overall objective of this study is to develop a novel, clinically-relevant, image-guided mouse model for radiation-induced cardiotoxicity, which can be used to gain insight into clinically-targetable, pathophysiologic mechanisms of cardiac injury in thoracic radiotherapy patients. METHODS/STUDY POPULATION: Photon or sham radiation will be administered at differential doses to a defined portion of the heart and/or lungs of C57BL/6 female mice using micro-CT visualization of the heart with Xstrahl's MuriSlice Software applied to the Small Animal Radiation Research Platform (SARRP). Cardiac and lung segments from a subset of mice will be harvested at specific time points for confirmation of radiation targeting, local apoptosis assessment, and evaluation of fibrosis and vascular tissue morphology. Quantitative echocardiography, myocardial 18F-fluorodeoxyglucose positron emission tomography computed tomography (18F-FDG PET/CT), and myocardial perfusion imaging (MPI) with Technicium-99 (Tc-99) sestamibi will be implemented to identify sensitive imaging measures of cardiac injury and asses myocardial mechanics, inflammation, and perfusion deficits, respectively. Concurrently, a multiparametric analysis will be conducted to identify novel, circulating biomarkers of cardiotoxicity. RESULTS/ANTICIPATED RESULTS: We hypothesize that a clinically-relevant mouse model can be generated by the in situ, focal irradiation of a portion of heart and/or lung tissue segments, and can be used to elucidate molecular mechanisms of radiation-induced cardiac damage. We anticipate time-dependent and dose-dependent, focal histopathologic changes in the mouse heart, with cardiac fibrosis development, vascular damage, and cellular apoptosis in irradiated mice. Additionally, we anticipate that our mouse model of focal heart irradiation will reveal radiologic and biochemical changes that can be used to characterize and predict radiation-induced cardiac injury. Specifically, we expect our quantitative echocardiography, FDG-PET, and MPI parameters to identify and characterize cardiac damage that topographically matches histopathological analysis, and expect levels of select biochemical markers to differentially vary with time. DISCUSSION/SIGNIFICANCE OF IMPACT: Our mouse model of radiation-induced cardiotoxicity has the potential to shift current preclinical research paradigms to more closely mimic the radiation plans most commonly administered in clinical practice. The primary technologic innovation to be developed here is the use of the SARRP to deliver image-guided, in situ, focal radiation to a defined portion of the mouse heart. From a conceptual perspective, we propose a novel approach for phenotyping radiation-induced cardiac damage in patients undergoing chest radiation therapy, integrating sensitive radiomic and biochemical markers into a predictive model of cardiotoxicity.

3268

A TL1 Team Approach to Personalizing Donor Human Milk for the Preterm Infant

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OBJECTIVES/SPECIFIC AIMS: Aim 1: To compare frozen MOM to fresh MOM over time as an agent to inoculate DHM and measure the enrichment of commensal microbes and their beneficial bioactive components similar to MOM. Hypothesis: Frozen or fresh MOM inoculated in DHM will produce similar microbial content to MOM over time allowing for the production of beneficial bacterial compounds that may contribute to host immune response. Aim 2: To determine the effect of MOM storage (fresh vs frozen) on the expansion of bioactive components from live microbiota in DHM. Hypothesis: Both fresh and frozen MOM will produce similar results when inoculated into DHM to restore the microbial content (including their bioactive components) similar to each MOM sample. Aim 3: To compare the microbiome found in a mother's MOM to the microbiome in her infant's stool. Hypothesis: The mother/infant pair will share a common microbiome between the mother's MOM and her infant's stool. METHODS/STUDY POPULATION: Subjects will include 12 pump-dependent mothers of infants born < 34 weeks gestation admitted to the University of Florida Health Shands Hospital, Neonatal Intensive Care Unit (NICU). Inclusion criteria consists of mothers expressing over 100 ml of MOM per day, producing at least 45 ml of MOM at an expression session, at least 18 years of age, and speak English. Mothers are excluded if they have taken antibiotics within 3 days of sample collection, are HIV+, or delivered an infant who has a chromosomal abnormality or is severely ill. An expressed MOM sample will be collected and divided into two fractions: (A) fresh and (B) frozen at -20C for 24 h. The fresh fraction (A) will be processed immediately while the frozen fraction (B) will be processed after 24 h. Each MOM will be inoculated in DHM at dilutions of 10% and 30% and incubated at different time points: 0 h (T0), 2 h

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