to predicted disease prognosis. METHODS/STUDY POPULATION: This will be a case-control study, analyzing data from previously created biorepositories from four cohorts of recipients across multiple centers which have undergone liver transplant. First, a GWAS will be performed to identify genetic variant(s). Second, pre-transplant MRI's will be evaluated using CAVASS software to assess liver quantitative and qualitative traits, including visceral adiposity. Lastly, these findings will be implemented into risk stratification models to assess each individual's level of risk for development of HCC and for recurrence of HCC after transplant. RESULTS/ANTICIPATED RESULTS: We hypothesize that genetic variant(s) are associated with positive HCV status and the development of HCC. Additionally, we hypothesize that increased visceral adiposity measured by MRI will have an association with recurrence of HCC after transplant. Lastly, we hypothesize that possession of these aforementioned features will be associated with an increased risk of HCC development and recurrence after transplant. DISCUSSION/SIGNIFICANCE OF IMPACT: As more is learned about the nature and reliability of these biomarkers, their potential clinical applications will be revealed. Ideally these proposed risk score models will ultimately be used by clinicians to provide personalized disease management while optimizing the allocation of health care resources. For instance, this may lead to changes in the MRI screening frequency of patients considered to be at high risk for HCC. The ability to diagnose patients early and provide personalized therapies may ultimately result in fewer disease related mortalities in the future.

3031

Facilitators and Barriers in Screening Sexually Active Female Adolescents for Chlamydia Infection in the Suburban Practice Setting

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OBJECTIVES/SPECIFIC AIMS: 1) Describe strategies pediatric providers perceive improve chlamydia screening of sexually active female adolescents (SA), and 2) describe barriers to regular screening of SA for chlamydia METHODS/STUDY POPULATION: Using qualitative methods, 14 general pediatric providers across 7 clinical sites in Vermont were interviewed to ascertain best practices and remaining challenges. Semi-structured interviews lasting 30-45 minutes were audiotaped and transcribed. Chlamydia screening rates provided by BCBS-VT were used to categorize participant responses across three performance tiers, data were coded, and themes identified within these tiers. RESULTS/ANTICIPATED RESULTS: Facilitators: When asked to describe facilitators of chlamydia screening, providers in the top tier of chlamydia screening emphasized the importance of adequate insurance to cover the cost of testing. Providers in the middle performance tier cited use of pre-visit questionnaires, and those in the bottom performance tier identified no best practices. Other strategies included improving physician confidence and awareness, establishing practice- and individual-level routines, and providing strong leadership and communication of local screening rates. Barriers: Across the 3 performance tiers, the most common challenges to consistent chlamydia screening were threats to patient confidentiality, cost of the screening test, and requirement for patient disclosure of sexual activity. Less commonly, providers were concerned that adolescent patients were not reliable to obtain screens off-site, or fill treatment prescriptions without the help of a parent. DISCUSSION/SIGNIFICANCE OF IMPACT: The need for systematic, confidential, and inexpensive means for screening SA for chlamydia was highlighted in both the best practices and challenges described by providers of pediatric care in the suburban practice setting. Policy and practice interventions may target these needs to improve the reproductive health of female adolescents.

3485

Frailty Associated with Increased Rates of Acute Cellular Rejection Within 3 Months After Liver Transplantation

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OBJECTIVES/SPECIFIC AIMS: There is currently a gap in the literature regarding the relationship between acute cellular rejection and frailty in LT patients. We aimed to evaluate the association between frailty and acute cellular rejection in LT patients. METHODS/STUDY POPULATION: Included were LT recipients from 2014-16 at a single center who had a frailty assessment prior to LT using the Liver Frailty index consisting of grip strength, chair stands, and balance. Frailty was defined by a Liver Frailty Index > 4.5. Data on acute cellular rejection at 3 months (primary outcome) and immunosuppression regimens were collected from medical chart review. Univariable and multivariable logistic regression assessed the associations between frailty and acute cellular rejection. RESULTS/ANTICIPATED RESULTS: A total of 241 LT recipients were included. Of these, 37% were female, 55% had Hepatitis C, and the median (IQR) age was 60 (54-65); 46 (19%) were classified as frail. 98% of patients were on a combination of mycophenolate, corticosteroids and tacrolimus on discharge compared to 80% by 3 months. Within the first 3 months post-LT, 7 (15%) of frail patients versus 10 (5%) ($p = 0.02$) of non-frail patients experienced acute cellular rejection. In univariable logistic regression, frailty was associated with a 3.3 times higher odds of acute cellular rejection at 3 months (95%CI 1.19, 9.26, $p = 0.02$); age (OR 0.91), Black race (OR 3.2), autoimmune disease (OR 2.3), and diabetes (OR 0.3) were also associated with acute cellular rejection at 3 months with a p-value<0.20. In a multivariate analysis, after adjusting for age, frailty remained significantly associated with rejection (OR 3.06, 95%CI 1.04, 9.01, $p = 0.043$). There were no significant differences in immunosuppression regimens or rates of mycophenolate dose reduction in the first 3 months between frail and non-frail patients. DISCUSSION/SIGNIFICANCE OF IMPACT: Frailty is associated with an increased rate of acute cellular rejection within 3 months post-LT, despite similar immunosuppression regimens and doses. Future studies should evaluate whether frailty should be considered in the management of immunosuppression in the early post-transplant period.

3345

Group Concept Mapping of Stakeholder's Ideas to Increase the Quantity and Quality of Clinical and Translational Research in Rhode Island

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OBJECTIVES/SPECIFIC AIMS: We sought to solicit and synthesize stakeholders' ideas for how the Advance-CTR program can best

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increase the quality and quality of clinical and translational research in Rhode Island, and to apply these findings to address barriers and strengthen research capabilities across our partner institutions. METHODS/STUDY POPULATION: We utilized a Group Concept Mapping approach, involving university and Institution-based researchers and administrators. The process was conducted using the web-based concept mapping application CS Global Max (Concept Systems, Inc). Respondents were asked to provide their best ideas for promoting clinical and translational research in RI. These ideas were then organized by our project team into a set of unique items for consideration by attendees of an Advance-CTR retreat. Participants were tasked with sorting these ideas by theme (cluster), and were also asked to rate each idea according its importance and feasibility. Using the online software, these clusters and ratings were analyzed to identify key themes and to explore differences among subgroups. RESULTS/ANTICIPATED RESULTS: The Group Concept Mapping exercise yielded 150 statements that were edited down to 78 unique ideas, and clustered into nine themes (e.g., institutional collaboration, training). Fifty-seven retreat participants completed the sorting and rating tasks of the concept mapping exercise. Overall, ideas rated as highly important and highly feasible included "providing seed grants to encourage new collaborations across basic science," and "connecting researchers with common interests." Top rated items varied across institutions and according to respondent demographics, allowing us to consider the unique issues relevant to particular groups. Relative rankings of clusters across groups revealed notable differences, such as higher importance placed on community engagement among administrators as compared with researchers, and differences in needs for internal support for research between universities. DISCUSSION/SIGNIFICANCE OF IMPACT: Group Concept Mapping was an effective and insightful participatory approach to engage our program's stakeholders in developing ideas and identifying challenges to enhancing clinical and translational research in Rhode Island. Our results have implications for project decision-making and initiatives to facilitate translational research in RI. Thus, results have been presented to the Advance-CTR community via webinar, as well as Advance-CTR project leadership and advisory committees.

3209

Hepatitis C Virus Linked To Increased Mortality in Inmates Who Are Hospitalized

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OBJECTIVES/SPECIFIC AIMS: Hepatitis C virus (HCV) has a high prevalence among individuals in jail and prisons. Access to HCV treatment has been restricted in jails and prisons. We hypothesized that HCV infection in inmates would be associated with increased mortality in people who were hospitalized while incarcerated. METHODS/STUDY POPULATION: We created and then linked a database of people who were incarcerated and admitted at Lemuel Shattuck Hospital (2004, 2008, 2011) to the Massachusetts Vital Statistic Registry (updated through end of 2015). Death was classified using the Automatic Classification of Medical Entry Death Code. The primary outcome of interest was mortality within 1 year of hospitalization, and the secondary outcome was mortality at any time. The primary indicator of interest was HCV, defined as the presence of the ICD-9 code for HCV on discharge. Covariates included in univariate and multivariate modeling included age, year of admission, and race/ethnicity classified as: White, Black, Hispanic or Other (i.e., Asian, Native American, Multi-Racial, or No answer). RESULTS/ANTICIPATED RESULTS: Of the 1,541 hospital admissions, 21% had HCV, and 57% were white, 22% black, 8% Hispanic and 12% other. Of the 273 total deaths (18% of cohort), 82 deaths occurred within 1 year of hospitalization (5.3% of the entire cohort, 30% of all deaths). The primary cause of death was vascular (21%), followed by chronic liver disease (18%), cancer (17%), overdose/suicide/trauma (19%), pulmonary (7%) and infection (6%). People with HCV were more likely to die of chronic liver disease (40% vs 7%, $p<0.001$). In the multivariable adjusted model, people with HCV were more likely to die within 1 year of hospitalization (HR 1.59, 95% CI 1.02, 2.49) and more likely to die at any time (HR 1.38, 95% CI 1.06, 1.79). Age, race and gender were not associated with risk of death. Compared to 2004, people admitted in 2008 (HR 2.05, 95% CI, 1.50-2.80) and 2011 (HR 4.02, 95% CI 2.77, 5.83) were more likely to die within 1 year. DISCUSSION/SIGNIFICANCE OF IMPACT: Despite advances in HCV treatment in the community, HCV in inmates is associated with increased mortality.

3294

HIGH INTENSITY BINGE DRINKING AND STIMULATING EFFECTS IN HUMAN LABORATORY STUDIES OF ALCOHOL SELF-ADMINISTRATION

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OBJECTIVES/SPECIFIC AIMS: Alcohol use disorder (AUD) has previously been studied using Timeline Followback (TLFB) interview measures and administration of alcohol within laboratory sessions. However, most of those studies supplied alcohol orally and analyzed drinking across a range of drinking intensity and frequency measures. High intensity binge drinking, i.e., drinking alcohol at multiple levels of the binge threshold (5+ drinks for males, 4+ drinks for females) has been identified as a significant risk factor for developing AUD. In the present study, we examined the relationship between high intensity binge drinking with the behavioral and subjective response to intravenous alcohol in a lab study. METHODS/STUDY POPULATION: Two hundred participants completed a 90-Day TLFB interview, wherein the maximum number of drinks in a day established the participant's binge level status as a Non-Binger ($N = 37$), Binge Level 1 ($N = 96$), Binge Level 2 ($N = 44$), or Binge Level 3 ($N = 22$). Binge Level 1 corresponds with at least one binge (4-7 drinks for women, 5-9 drinks for men); Binge Level 2 requires at least twice the binge level (8-11 drinks for women, 10-14 drinks for men); and Level 3 necessitates a participant to drink at least three times the binge level (12+ drinks for women, 15+ drinks for men) on one day. Non-Bingers had no binge level drinking in the 90-day interview. Participants also underwent a 150-minute intravenous-alcohol self-infusion, where participants would press a button to receive an infusion of an ethanol solution. During this, participants also completed subjective questionnaires including the Alcohol Urge Questionnaire (AUQ), Biphasic Alcohol Effects Scale (BAES), and Drug Effects Questionnaire (DEQ). Kruskal-Wallis and chi-square tests were used to examine the effect of group on alcohol infusion and subjective response measures. RESULTS/ANTICIPATED RESULTS: A chi-square test for association showed significant statistical differences by groups in reaching binge level status (0.08% breath alcohol content) during the alcohol infusion session in the lab, $X2\ (3) = 23.321$, $p < 0.001$. However, mean difference

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