

39 years who are diagnosed with a malignancy common between adult and pediatric facilities within 2013-2017. Data will be abstracted from an existing database at MCW containing patient information at the adult and pediatric centers. Study population: Patients ages 15-39 years of age who are categorized as young adolescent and adult patients (AYAs). Patients are eligible for the cohort if they have a diagnosis that is common between adult and pediatric oncology centers and that is made within the years 2013-2017. These diagnoses will include ALL, AML, Hodgkin Lymphoma, Non-Hodgkin Lymphoma, Germ cell tumors, Osteosarcoma, Ewing Sarcoma, other sarcomas, and CNS tumors. RESULTS/ANTICIPATED RESULTS: There will be a difference in health care utilization, clinical trial enrollment and toxicity of therapy in AYAs with malignancies treated at an adult facility than AYAs treated for similar malignancy at pediatric facility. DISCUSSION/SIGNIFICANCE OF IMPACT: There will be a difference in receipt of supportive care referrals, including psychology, social work, sperm banking, initiation of palliative care, in AYAs treated at a pediatric facility compared to AYAs treated at adult facility.

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Determining the association of acculturation, community identity and discrimination on cancer screening rates and quality of life among underserved populations

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OBJECTIVES/SPECIFIC AIMS: To determine the association of participant's characteristics and socio-cultural factors including acculturation, community identity and discrimination with the adherence to cancer screening guidelines and participants' quality of life. METHODS/STUDY POPULATION: As part of the Cancer Disparities Research Network pilot cohort, the study recruited 333 participants across four sites: Boston Chinatown, African American communities in Philadelphia, and Hispanic communities in Columbus, and rural white communities in Appalachia, Ohio. Enrolled participants were eligible if they were 40 to 74 years old, did not live in a nursing home or other facility, and had no prior invasive cancer diagnosis. Additionally, each participant met at least one of the following criteria: living in a medically underserved area, having low literacy, low income (defined as 100% of the 2015 Federal Poverty Level FPL according to 2015 FPL Guidelines), or being uninsured or receiving subsidized health insurance coverage. Participants completed a baseline survey of demographic data, health status, including health behaviors and risk factors to cancer, Primary Care Physician (PCP) status and most recent breast, cervical, prostate, skin and colorectal cancer screenings. Information related to discrimination, acculturation or adaptation, and sense of belonging to their community was collected using validated instruments. RESULTS/ANTICIPATED RESULTS: Of the 333 participants enrolled in the study, 65.5% were women, 14.1% were 40-50 years of age, 59.8% were 51-64 years, and 26.1% were 65-74. The cohort was racially and ethnically diverse: 8.4% of participants identified as Hispanic, 30.3% as non-Hispanic White, 31.2% as non-Hispanic

Black, 29.4% as non-Hispanic Asian, and 0.6% as Other. 62.2% spoke English, 8.1% Spanish, and 29.7% Chinese as their primary language. Low incomes were common: 33.6% reported incomes \$15,000 or less, and 25.8% reported incomes between \$15,000 and \$24,999. Overall adherence to USPSTF guidelines on cancer screening rates was 77.9% for breast cancer, 71.1% for cervical cancer, and 67.7% for colorectal cancer. Analyses will present the association of acculturation, community identity, and discrimination with cancer screening and quality of life measures. DISCUSSION/SIGNIFICANCE OF IMPACT: This study will promote the increase of cancer disparities research, and reinforce the importance of inclusion and increased recruitment of diverse populations in future studies. By determining the potential factors associated with cancer disparities among minority populations, it may provide new information for clinicians to have more cultural sensitivity addressing potential disparities in the clinical setting. It will also promote the creation of more tailored interventions and programs to deliver adequate healthcare among these populations.

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Developing a population health learning system

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OBJECTIVES/SPECIFIC AIMS: Population health research seeks to identify and address variation in needs, care experiences, and outcomes for a defined geography or subgroup. Solutions often require collective actions of complex interdependent health and social service systems in communities. System sciences focused on implementation and dissemination are vital for developing interventions that work at the intended scale in these "real world" environments; yet these approaches are often underutilized. METHODS/STUDY POPULATION: The UCLA Clinical Translational Science Institute (CTSI) co-developed a Population Health Program with the local health department to advance the practice and use of these system science methods. The vision is integrated training, methodological innovation, and real-world application in the region. One specific aim of the program is preparing investigators to apply suitable translational methods to solve population health problems in both health systems and in public health. Investigators from different parts of the university partnered with health services and public health leadership to develop and team-teach new curriculum in system sciences that integrates their disciplines (epidemiology, education, psychology, health policy and management). RESULTS/ANTICIPATED RESULTS: New curriculum in population and implementation/improvement sciences offers junior investigators effective modules and training opportunities that can support their career awards. The program is also increasing the receptivity and readiness of population health delivery systems to apply system science methods to pressing problems. Program metrics include total participants, research yielded by the collaboration, and skills and system science mindset acquisition among trainees, investigators, and health personnel. DISCUSSION/SIGNIFICANCE OF IMPACT: CTAs can partner with health and public health agencies to develop shared infrastructure, developing capacity in the university and in the partnered local agencies so that investigators and the agencies that are responsible for population health can work together to apply suitable

translational methods to solve population health problems in both health systems and in public health.

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Development and implementation of a faith-based community Health Advocate training programme for type-2 diabetes remission: A model for community-based non-communicable disease control

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OBJECTIVES/SPECIFIC AIMS: The aim of this study is two-fold (1) to include a participatory action research design in the development of a community-based health advocate (HA) training programme which empowers community members to support the Barbados diabetes remission study 2 protocol – a low-calorie intervention for T2DM remission (2) to study the implementation of this programme with in select faith-based organisations (FBOs) which will act as community hubs. **METHODS/STUDY POPULATION:** Translation was informed using the RE-AIM framework. The target population were members of select FBOs. We assessed the readiness of FBOs to become community hubs in relation to human resources (the HA team must include someone with a clinical degree), infrastructure capacity (a private room for interviews) and the perspective (knowledge and attitude) of the FBO leadership to both the training and diabetes remission programmes. An open recruitment for HAs was made to the FBO membership and all who responded were accepted to the programme; which consisted of 8 weeks of face to face sessions inclusive of lectures and practical demonstrations and exercises specific to NCDs e.g. assessment of basic clinical parameters, ethics and nutrition. This was followed by a simulation exercise and a formal objective structured clinical examination (OSCE). HAs will participate in focus groups aimed at exploring the barriers and facilitators to the use of social media as a support system; this will be followed by participatory design workshops where the HAs will design support systems, inclusive of social media support, to assist participants in the diabetes remission intervention. **RESULTS/ANTICIPATED RESULTS:** All three FBOs that were approached responded favourably and the programme was described as ‘necessary’ and ‘timely’ by the leadership. The FBOs were assessed and found to be ready. Thirty-eight persons signed up for the programme (more than the 21 we anticipated); 31 (82%) attended at least 1 session and 29 completed the training; this indicates that implementation in the community is feasible. All who completed the programme attained an overall passing grade indicating the effectiveness of, and fidelity to the training. Initial feedback on the programme from HAs and volunteers indicates that it was acceptable. **DISCUSSION/SIGNIFICANCE OF IMPACT:** This community-based training programme was successful in terms of reach, as both the FBO and the individual HA responded favourably; and effectiveness as measured by the expanded skill set of the HA. Initial feedback suggests that implementation of the programme is feasible in the community and acceptable to the HAs. Although this model focusses on diabetes remission utilising FBOs as hubs, it can be easily adapted to other NCDs e.g. hypertension and mental health; other disciplines e.g. surveillance; and other communities e.g. workplaces, homeless shelters.

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Engagement in Out-Patient Services among Pregnant and Postpartum Women with Opioid Addiction: A Qualitative Study

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OBJECTIVES/SPECIFIC AIMS: This study aims to understand the factors influencing engagement with out-patient services from pregnancy to 1 year postpartum among women in recovery from opioid use disorders (OUD). **METHODS/STUDY POPULATION:** We conducted semi-structured qualitative interviews and a brief survey with 20 mothers in OUD recovery recruited from health care and community organizations in Western MA. Transcripts were coded by two independent coders and analyzed using a qualitative descriptive approach. **RESULTS/ANTICIPATED RESULTS:** The average duration of any addiction treatment among the 20 participants was 5.6 years with 80% receiving medication-assisted treatment during a pregnancy. Approximately two-thirds experienced relapse during pregnancy or the first year postpartum. We identified 3 themes elucidating women’s experiences around service engagement: “How I see myself” (personal development), “How services see me” (service delivery quality), and “Are you with me?” Personal development included response to past trauma, coping strategies and self-advocacy, and adjusting to parenthood. Service delivery quality was influenced by service design, efficacy of individual providers, and cultural norms (organizational and societal). In the final theme, intersection of individual and service-level factors influenced the degree and quality of the women’s experience engaging with services. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Women describe successful engagement when they experience service providers as being emotionally supportive, delivering relevant services, and advocating on their behalf. To best support and engage families affected by OUD, relevant and timely services should be linked with compassionate delivery.

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Evaluation of novel biomarkers of hepatocellular carcinoma development and recurrence in liver transplant patients

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OBJECTIVES/SPECIFIC AIMS: Given the poor prognosis of HCC and its increasing incidence worldwide, identifying biomarkers of HCC has been an active area of research. While biomarkers are being identified at a rapid pace, many are still in early phases of clinical study and very few have proven clinical utility. The objective of this study is to identify novel biomarkers of HCC and evaluate their clinical utility as predictors of disease development and prognosis with specific emphasis on disease recurrence after liver transplantation. Biomarkers will be identified through GWAS, as well as through analysis of qualitative and quantitative liver traits by magnetic resonance imaging (MRI). These novel biomarkers will then be implemented into risk prediction models aimed to assess an individual’s risk for development of HCC and stratify their level of risk according