

Award (CTSA) site at the University of Michigan, is adopting human-centered design (HCD) to advance the science of community engagement in translational research and CE's programmatic efforts. **METHODS/STUDY POPULATION:** The MICHHR CE Program supports academic-community partnerships to transform translational research across the state of Michigan. As the team aims to better engage partners to help guide the direction of their work, CE is collaborating with MICHHR's Design and Innovation Core to incorporate human-centered design (HCD). HCD is an approach that prioritizes the needs, values, and perspectives of direct users during the creation of a new product or service. The MICHHR team created interactive HCD activities for two statewide retreats to elicit feedback from community and academic members on ways to enhance community-engaged research (CEnR). Retreat participants worked on a variety of problems, such as barriers to partnering and defining impact for CEnR. These activities generated authentic, contextual, and multi-view data captured in various artifacts for systematic analysis. **RESULTS/ANTICIPATED RESULTS:** In the first retreat, a HCD activity had participants reflect on their own barriers to partnering in research and potential solutions. In the second retreat, an HCD activity facilitated participants interviewing each other on their views of the impact in CEnR. Results from the first activity identified a set of common barriers to CEnR, some related to partnership formation, communication, and partner equity, among others. These led the CE Program to specific programmatic efforts, such as designing a statewide partnership platform, hiring a communication program manager, and sponsoring community partners to join national conferences. The second retreat activity produced rich data to identify overlaps between different perspectives to inform how impact can be defined and measured in CEnR. **DISCUSSION/SIGNIFICANCE OF IMPACT:** HCD activities provide means to include community and academic members in the science of CEnR. They allow systematic ways to gather information directly from the diverse set of current or prospective partners of community engagement programs about their needs, experiences, and values, which can be translated to programmatic innovation.

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Aligning community-engaged research competencies with online training resources across the Clinical and Translational Science Award Consortium

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OBJECTIVES/GOALS: The extent that Clinical and Translational Science Award (CTSA) programs offer resources accessible online for training in community-engaged research (CEnR) core competencies is unknown. This study cataloged CEnR resources accessible online from CTSA and mapped resources to CEnR core competencies. **METHODS/STUDY POPULATION:** Eight domains of CEnR core competencies were identified: knowledge/perceptions of CEnR; personal traits necessary for CEnR; knowledge of/relationships with communities; training for performing CEnR; CEnR methods; program evaluation; resource sharing and communication; and dissemination and advocacy. A systematic review of CEnR resources accessible online from CTSA was conducted between July 2018 and May 2019. Resource content was independently reviewed by two reviewers and scored for

inclusion of each domain of CEnR core competencies. Domain scores across all resources and inter-rater reliability in scoring domains were assessed using descriptive statistics and Cohen's kappa coefficients. **RESULTS/ANTICIPATED RESULTS:** Overall, 214 resources available from 24 CTSA were eligible for full review. Scoring discrepancies for at least one domain within a resource initially occurred in 51% of resources. "CEnR methods" (50.5%; 108 of 214) and "Knowledge of/relationships with the community" (40.2%; 86 of 214) were most frequently addressed and "Program evaluation" (12.1%; 26 of 214) and "Dissemination and advocacy" (11.2%; 24 of 214) were least frequently addressed domains. Additionally, challenges were noted in navigating CTSA websites to access CEnR resources, and CEnR competency nomenclature was not standardized. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Our findings guide CEnR stakeholders to identify CEnR resources accessible online and gaps to address in CEnR resource development. Standardized nomenclature for CEnR competencies is needed for effective CEnR resource classification. Uniform organization of CTSA websites may maximize navigability. **CONFLICT OF INTEREST DESCRIPTION:** In addition to the funding information listed previously (see above), within the last three years, R.J. Piasecki has been employed as: Project Coordinator, CEnR Online Learning Project, Johns Hopkins University School of Nursing (Current) Temporary Employee (Doctoral Student Intern), Michigan State University Institute for Health Policy (Current) Clinical RN, Intrastaff at the Johns Hopkins Health System (Past) Research Data Analysis Assistant, Maryland Institute for Emergency Medical Services (Past - contracted)

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An Intervention Mapping Approach to Develop Interventions to Improve Access to Kidney Transplant

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OBJECTIVES/GOALS: Kidney transplant is superior to dialysis for the treatment of end-stage kidney disease, but accessing transplant requires high patient engagement. We sought to develop a group counseling intervention with patients and their social support members using an evidence-based, stakeholder-engaged approach. **METHODS/STUDY POPULATION:** We employed an Intervention Mapping approach to incorporate qualitative data from stakeholders on barriers to accessing kidney transplant. Data were collected from 13 focus groups of African American (AA) and white adult kidney transplant candidates and their social support networks in Minnesota and Georgia. We completed this process through (1) qualitative data collection, (2) utilizing data and intervention mapping methods to develop a conceptual framework to describe associations between behavioral determinants and desired outcomes, and (3) using these products to identify evidence-based approaches to modify behavioral determinants through a theory based intervention. **RESULTS/ANTICIPATED RESULTS:** Participants describe experiences of overwhelm, isolation, helplessness, and difficulty communicating. In addition, AA participants expressed distrust in the medical system. We systematically incorporated these themes into a conceptual model of behavior change that identifies determinants of necessary actions to obtain transplant, including knowledge, self-efficacy, reduced decisional conflict, and perception of social support. Evidence-based methods to modify these determinants, such as modeling, goal-setting, and mobilizing social support, were incorporated into the design of a group education and counseling intervention with an individualized risk calculator.

DISCUSSION/SIGNIFICANCE OF IMPACT: Intervention mapping allows for behavior change theories to be incorporated into counseling sessions with patients and their social support networks. This approach translates qualitative data into an evidence-based intervention which will be piloted in a randomized controlled trial (RCT) to determine feasibility for a larger RCT.

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Ascertaining the Medical Needs of Galveston County

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OBJECTIVES/GOALS: Data were collected or abstracted from a wide variety of sources related to health and health care needs to determine the current health status of the Galveston community including:

- Demographics
- Social Determinants of Health
- Health Care Access and Insurance Status
- Poverty and Socio-Economic Indicators Impacting Health
- Health Behaviors
- Chronic Disease
- Communicable Disease
- Birth Outcomes
- Mortality
- Cancer
- Data on Services Provided at UTMB
- Data on Services Provided through the Galveston County Health District
- Data on Services Provided through the St. Vincent's House Clinics, student-led clinics operated at a local non-profit organization
- Previous Galveston County Community Health Needs Assessment
- Identifying Gaps in Services
- Prevention Quality Indicator Data

METHODS/STUDY POPULATION: In addition to collection and analysis of secondary data, we also interviewed key stakeholders to solicit their input and recommendations. We met with leadership from St. Vincent's House regarding current services provided, perceived issues and concerns, and needs for improvements. We met with leaders from UTMB's academic enterprise to discuss the operation of our current student-led clinics as well as ways in which clinical practice experiences might be expanded and included more formally in the student curricula should the clinical capacity of St. Vincent's House also be significantly expanded. This would increase the number of services that could be offered at St. Vincent's and greatly increase the capacity for enrolling patients without relying on faculty volunteers to staff the clinics. We also met with UTMB leaders in a position to provide insight to issues that bridge the UTMB practice arena and public health and with Community Health leaders from the Galveston County Health District and Teen Health Clinics. Information Services leadership and Institute for Translational Science informatics faculty and staff were instrumental in determining what data could be abstracted from the Electronic Medical Record (without patient identifiers) to determine the specific need for services at St. Vincent's. **RESULTS/ANTICIPATED RESULTS:** The City of Galveston has a population just under 50,000. Since 2010, the proportion of elderly has increased, and the proportion of families with younger children has decreased. Poverty is high at 22.3% for all people, and especially high for children at 32.1%.

Poverty disproportionately affects racial and ethnic minorities, with 36.5% of the Black population living below the poverty level, compared to 25.5% Hispanic, 30.5% Asian, and 14.7% White. Home ownership is decreasing, and median rent costs have sharply increased. The percentage without health insurance is considerable, driven by educational attainment, age, and race. In 2017, >40% of renters spent more than 35% of their income on housing. Upwards of 2,650 reported not having access to a vehicle for transportation. While residents of Galveston County as a whole are less impoverished, those that are impoverished share marked similarities. Lower educational attainment, in particular failure to complete high school or obtain a college degree, are correlated with race. Lower educational attainment then is highly predictive of poverty and low income. The income inequality ratio, i.e., the greater division between the top and bottom ends of the income spectrum in Galveston County is higher than in Texas or the nation and has increased every year but one since 2010. Issues of concern for Galveston County include obesity, Type II diabetes, and disability. These are exacerbated by built and social environment issues such as food insecurity, limited access to healthy foods, and food deserts in some neighborhoods. Pre-term birth rates are higher in Galveston than in the state or nation, and approximately 40% of women do not receive prenatal care until the 2nd or 3rd trimester or receive no prenatal care at all. 8.4% of births are low-birth weight. Marked disparities by race and ethnicity exist for each of these indicators. Age-adjusted death rates for all-cause mortality are higher in Galveston County than they are in Texas or the United States. Perhaps of most concern are the rates of death from septicemia, which are nearly triple that of the U.S. and nearly double that of the state, and cancer. Cancer incidence is not particularly remarkable, however, cancer age-adjusted mortality rates for many specific cancers well exceed state rates. **DISCUSSION/SIGNIFICANCE OF IMPACT:** With a clearer picture of the medical and other needs impacting health or health care access for our community, all stakeholders and experts can provide more detailed recommendations about prioritizing care and especially, preventive care—much of which could conceivably be provided in St. Vincent's House clinics. Opportunities exist for enhanced practice and education opportunities for UTMB students from all schools. Preventive Care and Population Health practices can be brought to bear in novel practice settings that could serve as models for provision of integrated services. Social and other services provided by non-profit organizations can be coordinated and streamlined. It is our hope that the considerable data presented herein will enable stakeholders to begin to prioritize issues and to make some evidence-based decisions about the next steps in this process. Throughout the interview and data collection process, all stakeholders have expressed both enthusiasm and hope at the prospect of re-visioning how they can contribute to a process that will improve how we as a community care for our most vulnerable members. **CONFLICT OF INTEREST DESCRIPTION:** The authors have no conflicts of interest to disclose.

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Assessing Depression in Puerto Rican Hispanic Patients Hospitalized with Heart Failure

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OBJECTIVES/GOALS: Heart failure and depression are important public health problems. Depression has been identified as an independent risk factor for increased cardiovascular morbidities. It is estimated that 1 out of every 5 patients living with heart failure suffer from depression. (Kop, W. J.) Studies have found that Hispanic