Collective capacity building tool (CCBT): A unique instrument and process supporting community-campus partnerships for translation

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OBJECTIVES/SPECIFIC AIMS: (1) Provide an innovative tool used to accelerate and evaluate T3-T4 research; (2) describe the collective capacity building tool (CCBT) methodology—both programmatic and evaluative applications; and (3) share insights about the process and outcomes of community-engaged research. METHODS/STUDY POPULATION: Academic and community-based partners complete the assessment together at the beginning and conclusion of their Community Engagement pilot projects. Further, they are encouraged to use the tool and the associated insights/priorities that emerge as the basis for data-driven coaching with Community Research Liaisons throughout the 12-month grant cycle. RESULTS/ANTICIPATED RESULTS: Pre/post results with 4 cohorts of pilot grantees consistently demonstrated the most positive change in relation to 1 item: overcoming previously identified barriers to community engagement (e.g., language, mistrust, scheduling conflicts). Other key findings: (1) networks of reciprocal ties expand, providing structures to support dissemination of information and interventions. (2) Partners leverage expanded networks to pursue follow-on funding and extend the scope/reach of their efforts geographically and/or with new populations. (3) Projects enhance trust in the research process by developing group-based processes that generate the respectful sharing of diverse (often alternative) viewpoints and through culturally-responsive project implementation. DISCUSSION/SIGNIFICANCE OF IMPACT: The CCBT can be used at multiple points in time to help project partners achieve the deliberate integration of CBPR principles in practice and advance community-engaged translational research efforts for sustainability and scalability. The CCBT is sensitive enough to document the iterative nature of partnership development and CBPR. An example: a great deal of variability was found in how formally partners defined roles. Further, partner roles often changed as projects evolved. Still, results indicated a general trend toward achieving greater clarity in partner roles over time. Further, the tool captured set-backs due to partner turnover and partnerships regaining momentum after new staff came on board. Results have strong face validity: more mature partnerships reported stronger community connections and previous successes to build upon. Perhaps most importantly: the tool and associated process was well-received by academic and community-based partners alike.

Screening for diabetes in high-risk women: Building the data infrastructure to study postpartum diabetes screening among low-income women with gestational diabetes

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OBJECTIVES/SPECIFIC AIMS: Women with GDM have a 7-fold higher risk of developing T2DM, and rates of GDM are higher among racial and ethnic minorities and women of lower socio-economic status. There are no data on postpartum diabetes screening after the first postpartum year or among women receiving care in FQHCs. We aim to address this gap in the literature by (1) describing the rates of screening for T2DM at 6–12 weeks and 1–3 years postpartum and (2) characterizing patient, provider, and healthcare system attributes that are associated with lack of follow-up screening for T2DM in a population of low-income women with GDM. METHODS/STUDY POPULATION: This is a retrospective cohort study of women with GDM during pregnancy receiving care in Missouri FQHCs from 2010 to 2015. Electronic health records (EHR) data from 40,451 women were housed in a central repository through the Missouri Primary Care Association (MPCA). This includes patient demographic, lab, and medication information as well as encounter level patient and provider data for the prenatal and postpartum period. EHR data does not include accurate delivery information, however. Pregnancies during the study time frame were identified using CPT and ICD9/10 codes. Deidentified data on individuals with a pregnancy was used to identify a subpopulation of “GDM candidates,” using a broad definition of glucose abnormalities as follows: ICD-9ICD-10 codes for diabetes, medications and testing supplies used for diabetes, infant birth weight ≥4000 g or 8 lb or 13 oz, or abnormal glucose labs [defined as fasting glucose ≥95, gestational glucose screen ≥130, 1 h test ≥130 or (≥180 if 2 h test and 3 h test recorded on same day), 2 h test ≥155, 3 h test ≥140, A1C ≥6, any glucose ≥130, or any positive urine glucose]. This subpopulation was then linked to Medicaid administrative claims data [housed at the University of Missouri Office of Social and Economic Development Analysis (OSEDA)], providing detailed information on delivery, to further characterize patients with GDM in the time frame and provide all dates necessary to classify glycaemia and postpartum periods. RESULTS/ANTICIPATED RESULTS: From the deidentified pregnancy data set including 45,810 individuals, we identified 8008 “GDM candidates.” EHR data were linked to Medicaid claims data for these individuals from 2010 to 2015. Utilizing the enhanced data set, we are defining a pregnancy for each individual by the delivery date in the Medicaid record and an algorithm using lab and ultrasound record dates to define gestational age at delivery. This will facilitate in a pregnancy level data set linked with individual encrypted identifiers with each record representing 1 pregnancy and postpartum period. GDM in pregnancy will be
SIGNIFICANCE OF IMPACT: Healthcare system factors, including uncoordinated transition of postoperative care to non-neurosurgeons and uncertain postoperative surveillance, represent barriers to follow-up for common patient-identified barriers to follow up after meningioma resection. Improving transition of care from specialists to non-specialists, including designation of appropriate imaging surveillance schedules, as well as improving communication between specialists and patients about the need for continued follow up, represent clear points for intervention that could improve care for this patient population. In addition, consistent and clear counseling about meningioma and its disease course may reduce loss to follow up following meningioma resection. It is important to note, however, that the small sample size represents a significant limitation of the study.

Incidence and predictors of noncompliance with evidence-based guidelines for early stage breast cancers using the National Cancer Data Base
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OBJECTIVES/SPECIFIC AIMS: Evidence-based guideline-concordant care leads to better outcomes in patients with early stage breast cancer, including survival. However, previous studies of guideline compliance have been limited by small study sample sizes, localized geography, unknown causal factors, and lack of diverse population. We use a national database to assess socio-economic, clinical, and facility factors that impact treatment compliance with evidence-based guidelines from the American Society of Clinical Oncology (ASCO) and the National Comprehensive Cancer Network (NCCN). METHODS/STUDY POPULATION: This is a retrospective cohort study of the National Cancer Data Base Participant User File Breast 2014, which captures ~70–80% of all newly diagnosed cancer cases in the United States. Female patients who were diagnosed with early stage breast adenocarcinoma (T0, T1, T1A, T1B, 2, 2A, or T2N0) from 2004 to 2014 were eligible for this study. RESULTS/ANTICIPATED RESULTS: A total of 807,314 patients were included in this study. Evidence-based guidelines examined with associated compliance rates include surgery completion (79.3% overall compliance), breast conserving surgery Versus mastectomy (88.05% vs. 11.95%, respectively), radiation after breast conserving surgery (77.5% overall compliance), HER2 testing (88.6% overall compliance), estrogen/progesterone receptor (ER/PR) testing (96.3% overall compliance), hormone treatment for positive ER/PR breast cancer (80.2% overall compliance), and sentinel lymph node biopsy completion (67.5% overall compliance). Univariate association between these guidelines and covariates such as facility type, facility location, age, race, insurance status, median income quartiles, achievement of high school degree, urban Versus rural, Charlson-Deyo score, year of diagnosis, and overall survival were assessed. Logistic regression analysis will be used to determine multivariate relationships between these characteristics and the probability that a patient will be compliant to guideline regimen. DISCUSSION/SIGNIFICANCE OF IMPACT: The results of this study will help identify socio-economic, clinical, and facility factors that influence guideline-concordant care and subsequent critical outcomes for patients with early stage breast cancer. Lossof quality of care for specific stages of cancer or treatment modalities will point to a need for tailored interventions to enhance compliance. A prediction model will help identify the most important predictors of noncompliance in breast cancer treatment so noncompliance can be prevented in at-risk populations.