

4161

### Contraceptive Decision Making Among Women with Diabetes Mellitus: A Mixed Methods Study

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**OBJECTIVES/GOALS:** Women with diabetes (DM) have higher rates of unplanned pregnancy and pregnancy complications, indicating a need for DM-specific counseling. Our aim is to use the Health Belief Model (HBM), widely applied to DM interventions, to create a conceptual model of contraceptive decision-making for women with DM. **METHODS/STUDY POPULATION:** Our convergent mixed methods study integrates quantitative survey data and qualitative interview data from women aged 18-50 with DM. We will interview until theoretical saturation is achieved. Descriptive statistics will be calculated to summarize demographics, health history, and contraceptive use and knowledge. Using a grounded theory approach, qualitative analysis will be conducted by JW and EJ with special focus on exploring HBM constructs. A joint display will be used to integrate key quantitative variables by qualitative themes. Finally, we will aim to implement these HBM constructs within the context of contraceptive decision-making for women with DM. **RESULTS/ANTICIPATED RESULTS:** To date, we have interviewed 16 women with average age of 35 and an equal mix of type 1 vs. type 2 DM and those who identify their health as poor/fair vs. good/very good. The following HBM domains have emerged as relevant to contraceptive decision-making: perceived threats, perceived barriers, cues to action and self-efficacy. An analysis of the cues to action domain suggests that patients' responses to provider counseling are substantially dependent on provider tone and awareness of patient context. Effective cues were delivered supportively with focus on health promotion, while ineffective cues focused on adverse outcomes or were delivered to women not at risk of pregnancy. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The application of the HBM to contraceptive decision making among women with DM will provide insight into critical factors that inform both patient and provider attitudes and behaviors and can be targeted for future interventions to reduce unplanned pregnancy in this vulnerable population.

4442

### CTSA Recruitment Resources: An Inventory of What CTSA Hubs Are Currently Offering

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**OBJECTIVES/GOALS:** The objective of this project was to determine the research volunteer recruitment capabilities and methodologies currently utilized by CTSA Hubs in order to disseminate recruitment best practices and create collaborations across institutions. **METHODS/STUDY POPULATION:** The CTSA Recruitment and Retention working group developed a REDCap survey to collect information about what participant recruitment and retention resources and processes

are being used at CTSA institutions to support investigators. It was distributed to CTSA institutions between May and July 2019. The survey, consisting of over 50 multiple choice and short answer questions, is an updated version of a 2016 survey. Institutions reported on registry use, feasibility assessment use, clinical trial listings, experience recruiting special populations, program operations and evaluation, workforce education, social media use and other recruitment resources. **RESULTS/ANTICIPATED RESULTS:** 40 of the 64 CTSA institutions completed the survey. Almost all of those responding are providing investigators access to a registry either favoring their institutional registry (45%) or ResearchMatch (34%) with most (85%) leveraging ResearchMatch to some extent. Over 80% of the CTSA institutions are providing investigators recruitment consultations, feasibility assessments, study listings, and EMR Utilization. 73% of the CTSA institutions are assisting with study materials with 47% offering social media assistance. Additionally, over half the respondents indicated they were successful recruiting healthy volunteers, patients, seniors, pregnant women, minors, low-income populations and underrepresented minorities; however, most found recruiting non or limited English speaking persons and rural populations challenging. **DISCUSSION/SIGNIFICANCE OF IMPACT:** A variety of recruitment and retention resources exist across CTSA institutions, and this inventory serves as a way to compile these services and foster collaboration across institutions. Additionally, it allows CTSA institutions to identify services not currently being offered that could improve outcomes while also creating opportunities for collaboration.

4104

### Development and validation of parental empathy analog tasks

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**OBJECTIVES/GOALS:** Parents' empathy toward their children affects their parenting, which can in turn impact child outcomes. Although parental empathy is theoretically distinct from trait empathy, current literature relies on largely self-report measures of parents' trait empathy. Thus, the current study evaluated new analog assessments of parental empathy. **METHODS/STUDY POPULATION:** One parental empathy analog measure (Empathy Measure for Parents Analog Task, Emotion Script; EMPAT-ES) was created based on parents' responses to open ended prompts describing scenarios that elicit different emotions (e.g., happy, mad, sad, scared) in children. These responses were used to create short scripts. A second analog task (EMPAT, Emotion Audio) was created using 20 sec audio clips of children expressing the different emotions wherein participants respond with how they feel hearing the emotions and separately, how they believe the child feels. After an initial pilot, both versions of the EMPAT-E were administered to 120 families enrolled in a prospective longitudinal study. Parents completed self-report measures of trait empathy and parental empathy, as well as the EMPAT-ES and EMPAT-EA analog tasks. **RESULTS/ANTICIPATED RESULTS:** Internal consistency of both the EMPAT-ES and EMPAT-EA tasks are expected to be robust, demonstrating the reliability of these novel assessments of parental empathy. Results are also expected to demonstrate the construct and convergent validity of both analog tasks. These new measures of parental empathy are expected to be significantly associated with measures of trait empathy. Specifically, parents' responses indicating how they believe the child feels in the analog are expected to be strongly related to their reported emotion recognition abilities and responses indicating how